

NORTHEAST FISHERIES OBSERVER PROGRAM

FISHERIES OBSERVER PROGRAM MANUAL



photo: Observer weighing Sand Dab Flounders



photo: Observer measuring Summer Flounder



photo: Humpback Whale

U.S. Department of Commerce/NOAA
National Marine Fisheries Service
Northeast Fisheries Science Center
Fisheries Sampling Branch
166 Water Street
Woods Hole MA 02543

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VESSEL AND TRIP INFORMATION LOG

The following instructions are for recording information regarding a particular vessel and trip. Some data requirements will require questioning the captain of the vessel for the information. Do not record assumptions. If the information is unclear, verify the answers with the captain.

If information is unavailable or unknown to any question except a “No/Yes” question, record a dash (-) in the field or check unknown. If the answer to a “No/Yes” question is unknown, record a “9” on the line next to the code for “No” to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered “No”, leave the field blank.

If the vessel returns to the dock after engaging in fishing activities, does not sell the catch, and then heads back out to fish, see code 13 in TIME LOST REASON (#40) and NOTE under TRIP COSTS heading.

If the vessel returns to the dock before engaging in fishing activities, and then heads back out to fish, see code 11 in TIME LOST REASON (#40), third NOTE under STEAM TIME (#19), and NOTE under TRIP COSTS heading.

INSTRUCTIONS

1. OBSERVER/TRIP IDENTIFIER: Record your three character Observer Identifier combined with the three character Trip Number and one character Trip Extension assigned to you for this trip. Use Table 1 to determine the correct trip extension. Use this Observer/Trip Identifier on all forms for this trip. For further instructions and specific examples on completing this field refer to Appendix F. Observer/Trip Identifier Instructions.

Example: Observer Green, who has been assigned identifier A02, is on her second trip of the calendar year, and it is a limited fish sampling gillnet trip. The observer/trip identifier is recorded as A02002L.

NOTE: If the catch is not unloaded when the vessel returns to the dock, and the ves-

sel returns to sea, use the same Observer/Trip Identifier. If **any** of the catch is unloaded, and the vessel returns to sea, use a new Observer/Trip Identifier and complete another Vessel and Trip Information Log.

| Extension | Trip Type |
|-----------|--|
| A | Aborted (non-gillnet) |
| C | Gillnet, complete fish sampling |
| D | Gillnet, complete fish sampling, aborted |
| L | Gillnet, limited fish sampling |
| M | Gillnet, limited fish sampling, aborted |
| -- | All other |

Table 1.

2. VESSEL NUMBER #1: Record the number written on the hull of the vessel **to which you are deployed**. This number will be either the U.S. Coast Guard Documentation Number or the state registration number. This number may have up to eight characters. This is not the same as the NMFS or state fishing permit number.

Examples: USCG Documentation Number - 1234567.

State Registration Number - ME1234A or NC1234AB.

3. VESSEL NAME #1: Record the name of the vessel **to which you are deployed**. Care should be taken to record the correct spelling of the vessel's name.

Example: Jo Jo.

4. EXPECTED TRIP DURATION: Record, in whole days, the number of days the captain **expects** to be away from port on this fishing trip.

NOTE: This question should be asked **before** the vessel leaves port.

5. DATE SAILED: Record the month, day, and year that the vessel leaves the dock to go fishing.

NOTE: If the vessel leaves the dock to take ice, fuel, pick up crew, *etc.*, at another location, record the date it leaves the

first dock. Record code 10 in TIME LOST REASON (#40). Record the amount of time that elapses between leaving the first dock and leaving the last dock to begin steaming to the fishing grounds in TIME LOST AMOUNT (#41).

NOTE: For beach seine/beach anchored gillnet trips, record the date that the dory leaves the trailer and heads out through the surf to set the gear.

6. TIME SAILED: Record the local time, using the 24 hour clock (0000-2359), that the vessel leaves the dock to go fishing.

NOTE: If the vessel leaves the dock to take ice, fuel, pick up crew, *etc.*, at another location, record the time it leaves the first dock. Record code 10 in TIME LOST REASON (#40). Record the amount of time that elapses between leaving the first dock and leaving the last dock to begin steaming to the fishing grounds in TIME LOST AMOUNT (#41).

NOTE: For beach seine/beach anchored gillnet trips, record the local time that the dory leaves the trailer and heads out through the surf to set the gear.

7. TRIP TYPE: Record whether one, or more than one **type** of gear is **used** during this trip by placing an "X" next to the appropriate one digit code:

- 1 = Single Gear.
- 2 = Multiple Gear.

8. VESSEL NUMBER #2: (for pair trawl and joint venture trips only) Record the number written on the hull of the vessel with which you are paired, or with which you are conducting joint venture operations. See VESSEL NUMBER #1 (#2) for further instructions on recording vessel numbers.

9. VESSEL NAME #2: (for pair trawl and joint venture trips only) Record the name of the vessel with which you are paired, or with which you are conducting joint venture operations. Care should be taken to record the correct spelling of the vessel's name.

10. CREW SIZE: Record the number of individuals working on the vessel, **including the captain**.

NOTE: If there is a change in CREW SIZE during a dockage mid-trip, record it in COMMENTS.

11. DATE LANDED: Record the month, day, and year that the vessel first arrives in port at the completion of your deployment. This is the docking port where the captain intends to sell the majority of this trip's catch. Record this date whether or not the catch is sold.

Example: The vessel returns to a dock on 02/03/01, with catch, but does not sell any fish. The observer remains on the vessel back to the fishing grounds. The vessel returns to the dock on 02/07/01 and arranges to sell its catch. DATE LANDED is 02/07/01.

NOTE: For beach seine/beach anchored gillnet trips, record the date that the fishing operations have ended and all fish have been picked and sorted.

12. TIME LANDED: Record the local time, using the 24 hour clock (0000-2359), that the vessel first arrives in port at the completion of your deployment. This is the docking port where the captain intends to sell the majority of this trip's catch. Record this time whether or not the catch is sold.

NOTE: For beach seine/beach anchored gillnet trips, record the local time that the fishing operations have ended and all fish have been picked and sorted.

13. HOME PORT: Record the **name** of the port, **including the state**, where the vessel is usually tied up when not fishing. This may be different from the PORT LANDED (#15) or from the port of registry on the vessel's stern.

Example: Gloucester, MA.

14. PORT CODE: Leave this field blank.

15. PORT LANDED: Record the name of the port, **including the state**, where the vessel offloads its catch. This may be different from the HOME PORT (#13).

NOTE: If the vessel sells its catch at more than one port, record the port where most of the catch is sold.

16. PORT CODE: Leave this field blank.

17. DEALER'S NAME: Record the name of the dealer where the captain sold the majority of the trip's catch. If the catch is not sold immediately after arrival in port, obtain this information from the captain.

NOTE: See Appendix S. Dealer List for a list of dealer names and the city and state they are located in.

18. SIX MONTH QUESTIONS ASKED?: Record whether the six month questions are asked and a Vessel and Trip Log - Six Month Questions Log is completed during this trip by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

NOTE: You may not record "Unknown" (9) for this field. This question **must** be answered "Yes" or "No".

NOTE: A Vessel and Trip Log - Six Month Questions Log should be completed **at least once every six months**. A list showing the vessel name and a date which is six months after the date these six month questions were last asked, will be mailed to you each month. If the DATE SAILED for this trip falls after the date on the list, record "Yes" (1) and complete a Vessel and Trip Log - Six Month Questions Log. If the DATE SAILED for this trip falls before the date on the list, record "No" (0) and do not complete a Vessel and Trip Log - Six Month Questions Log. Although this system is designed to reduce redundancy in your data collection, you may ask these questions more frequently than every six months. If in doubt, ask the questions.

Refer to the Vessel and Trip Information Log-Six Month Questions section of the NEFSC Observer Program Manual for further instructions.

19. STEAM TIME: Record, to the nearest tenth of an hour, the time that elapses between the vessel leaving the dock to go fishing, and arriving at the location

where the gear is first deployed/hailed.

NOTE: If the vessel reaches the location where it will begin fishing but does not deploy/haul the gear because of weather conditions or because it is awaiting the other vessel (i.e., on pair trawl trips), *etc.*, **do not include the time spent waiting to deploy/haul the gear in steam time.**

NOTE: If the vessel leaves its original dock to take on ice, fuel, *etc.*, at another dock, do not include the time spent in these activities as steam time, but as time lost; see code 10 in TIME LOST, REASON (#40).

NOTE: If the vessel returns temporarily to port before deploying the gear and then heads back out to fish, record the time spent steaming from the dock, and steam time back to the dock in TIME LOST, REASON (#40) and AMOUNT (#41).

NOTE: If gear being observed is beach seine/ beach anchored gillnet, record a dash.

NOTE: Include in this field any time the vessel spends "looking" for fish before deploying gear.

Example: Vessel departs from New Bedford at 00:01, and arrives at 18:50 on the fishing grounds where the first set will be made. The STEAM TIME is 18.8.

20. ICE USED: Record, to the nearest **hundredth** of a ton, the estimated amount of ice used during this trip. Include purchased ice and ice made by the vessel. This information should be obtained from the captain at the end of the trip.

21. FUEL USED: Record, in whole gallons, the **estimated** amount of fuel consumed during this trip. This information should be obtained from the captain at the end of the trip.

TRIP COSTS

NOTE: If the vessel takes on more food, fuel, ice, water, oil, or bait during a dock-age mid-trip (when fish are not offloaded), add each amount to the appropriate field's total for the trip.

NOTE: If no costs are incurred, record a zero "0" in the appropriate field(s).

22. DAMAGE AND LOSS ESTIMATE: Record, to the nearest dollar, the captain's estimate of the cost of gear and/or equipment lost or damaged during this trip. Provide a description of the damage or loss in COMMENTS.

23. SUPPLIES: Record, in dollars and cents, the price paid for commonly used supplies purchased for this trip. List the items included in this value in COMMENTS. This information may be obtained from the captain or a crew member.

Examples: Hooks, twine, gangions, lightsticks, chains, shackles, knives, gloves, *etc.*

24. FOOD: Record, to the nearest dollar, the cost to the crew and captain for food purchased for this trip, **including the observer's food.**

25. ICE: Record, in dollars and cents, the price paid **per ton** of ice purchased for this trip.

NOTE: If the vessel makes its own ice, or if no money is paid for ice, record "0".

26. FUEL: Record, in dollars and cents, the price paid **per gallon** for fuel purchased for this trip. This information may be obtained from the captain or owner before the vessel leaves port.

27. WATER: Record, to the nearest dollar, the cost of fresh water purchased for this trip.

NOTE: If the vessel makes its own fresh water, or if no money is paid for fresh water, record "0".

28. OIL: Record, to the nearest dollar, the cost of **lubricating** oil purchased for this trip.

29. BAIT: Record, to the nearest dollar, the cost of bait purchased for this trip.

GEAR INFORMATION

30. PRIMARY GEAR: Indicate the principal gear used during this trip by recording the most appropriate gear name possible, as listed in Appendix D. Gear Codes.

31. GEAR CODE: Leave this field blank.

32. OTHER GEAR(S): Indicate any other fishing gear onboard the vessel, soaking, used or secured by recording the most appropriate gear name possible, as listed in Appendix D. Gear Codes.

33. GEAR CODE(S): Leave this field blank.

34. HAULED/USED: Indicate whether or not the type of gear(s) listed in PRIMARY GEAR (#30) and OTHER GEAR(S) (#32) was/were hauled by the vessel during this trip by placing an "X" next to the appropriate code:

0 = No.
1 = Yes.

35. NUMBER ONBOARD: Record the number of each type of fishing gear onboard the vessel, used or secured.

Examples: For the following gear types, record the count in the listed units:

Longline - Number of nautical miles of mainline.
Pots or traps - Number of individual pots or traps.
Gillnets - Number of nets.
Trawl - Number of nets.
Scallop - Number of dredges.

36. NUMBER SOAKING: Record the number of each type of fishing gear the captain has soaking in the water at the beginning of this trip.

Examples: For the following gear types, record the count in the listed units:

Longline - Number of nautical miles of mainline.
Pots or traps - Number of individual pots or traps.
Gillnets - Number of nets.

37. CAPTAIN'S EXPERIENCE: Record, in whole years, the number of years the captain has operated a vessel **in this fishery with the type of gear recorded in PRIMARY GEAR (#30) and OTHER GEAR(S) (#32).**

NOTE: This experience is gear specific, not gear and target species specific.

Example: Correct: How many years have you been gillnetting as a captain?

Incorrect: How many years have you been gillnetting for cod as a captain?

NOTE: If this time is less than six months,

record "0".

NOTE: If the gear type(s) listed in OTHER GEAR(S) (#32) was (were) **not used** during this trip, record a dash in this field.

38. TARGET SPECIES: Indicate the principal species, or species group sought with the type of gear recorded in PRIMARY GEAR (#30) and OTHER GEAR(S) (#32) by recording the most appropriate and specific **species name** possible, as listed in Appendix A. Species Names. This information must be obtained from the captain, but should be asked before any gear is set or hauled, and **not** based on the results of this trip's catch.

Examples: Cod.
Mixed Flounder.
Weakfish & Croaker.

NOTE: If the gear type(s) listed in OTHER GEAR(S) (#32) was (were) **not used** during this trip, record a dash in this field.

39. SPECIES CODE: Leave this field blank.

TIME LOST

40. REASON: Indicate the reason(s) for any amount of **fishing** time the vessel loses during this trip while using the **primary** gear type, by recording the most appropriate two digit code as listed below and in Appendix I. Time Lost Reason Codes:

- 00 = Unknown.
- 01 = Gear conflict with another vessel.
- 02 = Gear damage repair.
- 03 = Engine repair.
- 04 = Awaiting arrival of other vessel, *i.e.*, pair trawling or offloading.
- 05 = Coast Guard boarding.
- 06 = Medical emergency, *i.e.*, medical evacuation.
- 07 = Weather conditions.
- 08 = Marine mammal interaction.
- 09 = Gear loss. Include only time spent trying to retrieve the gear.
- 10 = Vessel leaves a dock at the start of the trip, steams to another dock(s) or port(s) to engage in an activity (*i.e.*, refueling, buying ice, picking up crew, *etc.*), and then steams

to the fishing grounds. Record the total amount of time spent steaming to, and docked at, the other dock(s).

- 11 = Vessel returns to a dock after reaching the location where it will begin fishing, but before deploying the gear, OR returns to the dock before reaching the location where it will begin fishing. Record the total amount of time spent steaming out, steaming back to the dock, and at the dock.
- 12 = Vessel returns to a dock **after completing fishing activities**, but no fish are offloaded. Vessel engages in an activity (*i.e.*, refueling, dropping off crew, *etc.*) and then steams to the dock where the captain intends to sell most of the catch. Record the total amount of time spent at the first dock, plus the time spent steaming to the offloading dock.
- 13 = Vessel returns to a dock **after beginning fishing activities**, but no fish are offloaded. Vessel then returns to the fishing grounds. Record the total amount of time spent steaming back to the dock, time spent at the dock, and the time spent steaming back to the grounds.
- 99 = Other, record the time lost reason in COMMENTS.

41. AMOUNT: Record, to the nearest tenth of an hour, for each reason recorded above (#40), the total amount of fishing time the vessel lost during this trip while using the **primary** gear type.

NOTE: Do not include **projected** time lost from the trip if the vessel returns to the dock sooner than planned because of a medical emergency, damaged or lost gear, *etc.*

NUMBER OF HAULS

42. TOTAL: Record the **total** number of hauls during this trip.

43. UNOBSERVED: Record the **total** number of hauls **not** observed during this trip.

NOTE: An **unobserved haul** is defined as one where complete discard information

from the haul is **not** collected.

PRIMARY SPECIES LANDED

44. SPECIES NAME: Record the name of the species, as listed in Appendix A. Species Names, which had the **greatest total number of pounds** landed (kept and sold) for this trip.

Examples: Cod.

Winter Skate (Wings).

45. POUNDS: Record, in whole pounds, the total weight of the PRIMARY SPECIES LANDED (#44).

SECONDARY SPECIES LANDED

46. SPECIES NAME: Record the name of the species, as listed in Appendix A. Species Names, which had the **second greatest total number of pounds** landed (kept and sold) for this trip.

47. POUNDS: Record, in whole pounds, the total weight of the SECONDARY SPECIES LANDED (#46).

SCALLOP TRIPS ONLY: CATCH INFORMATION

48. SOAKED?: Record whether, during the trip, any scallop meats were soaked in a solution **other than water** by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

49. MIXED?: Record whether, during the trip, any scallop meats were mixed with larger or smaller scallop meats by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

NOTE: "Mixed" refers to the practice of mixing the catch to get a certain meat count per bag.

50. NUMBER OF BAGS: Record the **total** number of bags of shucked scallops from this trip.

NOTE: If the scallops from this trip are not shucked, record a dash (-), and write "shell stocked" in COMMENTS.

51. AVERAGE WEIGHT PER BAG: Record, in whole pounds, the **average** weight of a bag of shucked scallops from this trip. This information may be obtained from the captain or at the dock after the scallop bags are offloaded and weighed individually.

COMMENTS

Record any additional information regarding the trip or associated expenditures below. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM
VESSEL AND TRIP INFORMATION LOG

IN-OFFICE

| | | | | | | | | | |
|-----------|--|------------------|--|--------------|--|----------------|--|-----|--|
| | | DATE RECEIVED | | | | AGE STRUCTURES | | N Y | |
| | | INCIDENTAL TAKES | | | | N B M T | | | |
| EDITED BY | | | | PROJECT NAME | | | | | |

| | | | | | | | | | | | |
|---|--|---|--|-----------------------------|--|--|--|--|--|--------------------------------------|--|
| OBS/TRIP ID 1 | | VESSEL NUMBER # 1 2 | | VESSEL NAME # 1 3 | | EXPECTED TRIP DUR 4 day(s) | | DATE SAILED mm/dd/yy 5 / / | | TIME SAILED 24 h 6 : . | |
| TRIP TYPE 7 Single Gear 1 _____ Multiple Gear 2 _____ | | VESSEL NUMBER # 2 8 | | VESSEL NAME # 2 9 | | CREW SIZE (Including Captain) 10 | | DATE LANDED mm/dd/yy 11 / / | | TIME LANDED 24 h 12 : . | |
| HOME PORT (CITY, STATE) CODE 13 14 | | PORT LANDED (CITY, STATE) CODE 15 16 | | DEALER'S NAME 17 | | 6 MONTH QUESTIONS? 18 No 0 _____ Yes 1 _____ | | STEAM TIME 19 hrs | | | |

| | | | | | | | | | | | | | | | |
|------------------------------|--|-------------------------------|--|-----------------------|--|--------------------------------|--|---------------------------------|--|------------------------|--|----------------------|--|-----------------------|--|
| ICE USED 20 tn | | FUEL USED 21 gal | | TRIP COSTS | | | | | | | | | | | |
| DAMAGE/LOSS Unknown _____ | | SUPPLIES Unknown _____ | | FOOD Unknown _____ | | ICE (PER TON) Unknown _____ | | FUEL (PER GAL) Unknown _____ | | WATER Unknown _____ | | OIL Unknown _____ | | BAIT Unknown _____ | |
| \$ 22 | | \$ 23 | | \$ 24 | | \$ 25 | | \$ 26 | | \$ 27 | | \$ 28 | | \$ 29 | |

| GEAR INFORMATION (IN USE & STOWED) | | | | | | | | TIME LOST | |
|------------------------------------|-------------------|--|----------------------|---------------------|-----------------------------|-----------------------------|----------------------|---------------------|----------------------------|
| PRIMARY GEAR 30 | CODE 31 | USED? No 0 34 _ Yes 1 _____ | # ONBRD 35 | # SOAK 36 | CAPT EXP (yrs) 37 | TARGET SPECIES 38 | CODE(S) 39 | REASON 40 | AMOUNT 41 hrs |
| OTHER GEAR 1 32 | CODE 33 | USED? No 0 34 _ Yes 1 _____ | # ONBRD 35 | # SOAK 36 | CAPT EXP (yrs) 37 | TARGET SPECIES 38 | CODE(S) 39 | _____ | _____ hrs |
| OTHER GEAR 2 32 | CODE 33 | USED? No 0 34 _ Yes 1 _____ | # ONBRD 35 | # SOAK 36 | CAPT EXP (yrs) 37 | TARGET SPECIES 38 | CODE(S) 39 | _____ | _____ hrs |
| OTHER GEAR 3 32 | CODE 33 | USED? No 0 34 _ Yes 1 _____ | # ONBRD 35 | # SOAK 36 | CAPT EXP (yrs) 37 | TARGET SPECIES 38 | CODE(S) 39 | _____ | _____ hrs |

| | | | | |
|---------------------------------|---------------------------------------|---------------------|---|--|
| # TRIP HAULS 42 | PRIMARY SPECIES LANDED 44 | POUNDS 45 | SCALLOP TRIPS ONLY | |
| | | | SOAKED? 48 No 0 _____ Yes 1 _____ | MIXED? 49 No 0 _____ Yes 1 _____ |
| # UNOBSERVED HAULS 43 | SECONDARY SPECIES LANDED 46 | POUNDS 47 | | |
| | | | 50 | AVERAGE WGT/BAG 51 lb |

COMMENTS

NMFS FISHERIES OBSERVER PROGRAM
VESSEL AND TRIP INFORMATION LOG

IN-OFFICE

| | | | | | |
|------------------|--|----------------|--|-----|--|
| DATE RECEIVED | | AGE STRUCTURES | | N Y | |
| INCIDENTAL TAKES | | N B M T | | | |
| EDITED BY | | PROJECT NAME | | | |

| | | | | | |
|--|--------------------------------|------------------------------|----------------------------------|---------------------------------|--------------------------------|
| OBS/TRIP ID | VESSEL NUMBER # 1 | VESSEL NAME # 1 | EXPECTED TRIP DUR | DATE SAILED mm/dd/yy | TIME SAILED 24 h |
| A74101- | 663242 | Cormorant | 14 day(s) | 01 / 13 / 01 | 15 : 30 |
| TRIP TYPE | VESSEL NUMBER # 2 | VESSEL NAME # 2 | CREW SIZE (Including Captain) | DATE LANDED mm/dd/yy | TIME LANDED 24 h |
| Single Gear 1 <u>X</u> Multiple Gear 2 _____ | | | 6 | 01 / 26 / 01 | 23 : 00 |
| HOME PORT (CITY, STATE) CODE | PORT LANDED (CITY, STATE) CODE | DEALER'S NAME | | 6 MONTH QUESTIONS? | STEAM TIME |
| Cape May, NJ | New Bedford, MA | Bedford Fish Shop | | No 0 _____ Yes 1 <u>X</u> | 12 . 3 hrs |
| ICE USED | FUEL USED | TRIP COSTS | | | |
| | | DAMAGE/LOSS Unknown _____ | SUPPLIES Unknown _____ | FOOD Unknown _____ | ICE (PER TON) Unknown _____ |
| 25 . 00 tn | 6500 gal | \$ 0 | \$ 100.00 * | \$ 1400 | \$ 45 . 00 |
| | | | | FUEL (PER GAL) Unknown _____ | WATER Unknown _____ |
| | | | | \$ 1 . 09 | \$ 0 |
| | | | | OIL Unknown <u>X</u> | BAIT Unknown _____ |
| | | | | \$ | \$ 0 |
| GEAR INFORMATION (IN USE & STOWED) | | | | | TIME LOST |
| PRIMARY GEAR CODE | USED? | # ONBRD | # SOAK | CAPT EXP (yrs) | TARGET SPECIES CODE(S) |
| Scallop Dredge | No 0 _____ Yes 1 <u>X</u> | 2 | 0 | 20 | Sea Scallop |
| OTHER GEAR 1 CODE | USED? | # ONBRD | # SOAK | CAPT EXP (yrs) | TARGET SPECIES CODE(S) |
| Harpoon | No 0 <u>X</u> Yes 1 _____ | 1 | 0 | | |
| OTHER GEAR 2 CODE | USED? | # ONBRD | # SOAK | CAPT EXP (yrs) | TARGET SPECIES CODE(S) |
| | No 0 _____ Yes 1 _____ | | | | |
| OTHER GEAR 3 CODE | USED? | # ONBRD | # SOAK | CAPT EXP (yrs) | TARGET SPECIES CODE(S) |
| | No 0 _____ Yes 1 _____ | | | | |
| # TRIP HAULS | PRIMARY SPECIES LANDED | POUNDS | SCALLOP TRIPS ONLY | | |
| 273 | Sea Scallop | 16,424 | SOAKED? | MIXED? | # OF BAGS |
| # UNOBSERVED HAULS | SECONDARY SPECIES LANDED | POUNDS | No 0 <u>X</u> Yes 1 _____ | No 0 <u>X</u> Yes 1 _____ | AVERAGE WGT/BAG |
| 130 | Monkfish | 1675 | | | 340 |
| 48 lb | | | | | |
| COMMENTS | | | | | |
| * \$50.00 was spent on gloves and \$50.00 on knives. | | | | | |
| Time was lost due to bad weather and winch repairs. | | | | | |

NMFS FISHERIES OBSERVER PROGRAM
VESSEL AND TRIP INFORMATION LOG

IN-OFFICE

| | | | | | | | | | |
|--|--|---------------|--|--|--|------------------|--|---------------|--|
| | | DATE RECEIVED | | | | AGE STRUCTURES | | N Y | |
| | | | | | | INCIDENTAL TAKES | | N B M T | |
| | | EDITED BY | | | | PROJECT NAME | | | |

| | | | | | | | | | | | | |
|---------------------------------|--|-------------------|--------------------------------|-----------------|--|----------------------------------|--|------------------------|--------------------|--------------------|------------|--|
| OBS/TRIP ID | | VESSEL NUMBER # 1 | | VESSEL NAME # 1 | | EXPECTED TRIP DUR | | DATE SAILED mm/dd/yy | | TIME SAILED 24 h | | |
| | | | | | | day(s) | | / / | | : | | |
| TRIP TYPE | | VESSEL NUMBER # 2 | | VESSEL NAME # 2 | | CREW SIZE (Including Captain) | | DATE LANDED mm/dd/yy | | TIME LANDED 24 h | | |
| Single Gear 1 _____ | | | | | | | | / / | | : | | |
| Multiple Gear 2 _____ | | | | | | | | | | : | | |
| HOME PORT (CITY, STATE) CODE | | | PORT LANDED (CITY, STATE) CODE | | | DEALER'S NAME | | | 6 MONTH QUESTIONS? | | STEAM TIME | |
| | | | | | | | | | No 0 _____ | | | |
| | | | | | | | | | Yes 1 _____ | | . hrs | |

| | | | | | | | | | | | | | | | | | | | |
|----------|--|-----------|--|-------------------|--|---------------|--|---------------|--|---------------|--|----------------|--|---------------|--|---------------|--|---------------|--|
| ICE USED | | FUEL USED | | TRIP COSTS | | | | | | | | | | | | | | | |
| | | | | DAMAGE/LOSS | | SUPPLIES | | FOOD | | ICE (PER TON) | | FUEL (PER GAL) | | WATER | | OIL | | BAIT | |
| | | | | Unknown _____ | | Unknown _____ | | Unknown _____ | | Unknown _____ | | Unknown _____ | | Unknown _____ | | Unknown _____ | | Unknown _____ | |
| . tn | | gal | | \$ | | \$ | | \$ | | \$ | | \$ | | \$ | | \$ | | \$ | |

| | | | | | | | | | | | | | |
|---|--|---------------|--|---------|--|--------|--|----------------|--|---|--|------------------------------------|--|
| GEAR INFORMATION (IN USE & STOWED) | | | | | | | | | | TIME LOST | | | |
| PRIMARY GEAR CODE | | USED? | | # ONBRD | | # SOAK | | CAPT EXP (yrs) | | TARGET SPECIES CODE(S) | | REASON AMOUNT | |
| | | No 0 _____ | | | | | | | | | | _____ _____ hrs | |
| | | Yes 1 _____ | | | | | | | | | | _____ _____ hrs | |
| OTHER GEAR 1 CODE | | USED? | | # ONBRD | | # SOAK | | CAPT EXP (yrs) | | TARGET SPECIES CODE(S) | | _____ _____ hrs | |
| | | No 0 _____ | | | | | | | | | | _____ _____ hrs | |
| | | Yes 1 _____ | | | | | | | | | | _____ _____ hrs | |
| OTHER GEAR 2 CODE | | USED? | | # ONBRD | | # SOAK | | CAPT EXP (yrs) | | TARGET SPECIES CODE(S) | | _____ _____ hrs | |
| | | No 0 _____ | | | | | | | | | | _____ _____ hrs | |
| | | Yes 1 _____ | | | | | | | | | | _____ _____ hrs | |
| OTHER GEAR 3 CODE | | USED? | | # ONBRD | | # SOAK | | CAPT EXP (yrs) | | TARGET SPECIES CODE(S) | | _____ _____ hrs | |
| | | No 0 _____ | | | | | | | | | | _____ _____ hrs | |
| | | Yes 1 _____ | | | | | | | | | | _____ _____ hrs | |

| | | | | | | | | | | | | | |
|--------------------|--|--------------------------|--|--|--|--------|--|---------------------------|--|---------------|--|--------------------------------|--|
| # TRIP HAULS | | PRIMARY SPECIES LANDED | | | | POUNDS | | SCALLOP TRIPS ONLY | | | | | |
| | | | | | | | | SOAKED? | | MIXED? | | # OF BAGS AVERAGE WGT/BAG | |
| | | | | | | | | No 0 _____ | | No 0 _____ | | | |
| | | | | | | | | Yes 1 _____ | | Yes 1 _____ | | lb | |
| # UNOBSERVED HAULS | | SECONDARY SPECIES LANDED | | | | POUNDS | | | | | | | |
| | | | | | | | | | | | | | |

COMMENTS

VESSEL AND TRIP INFORMATION LOG - SIX MONTH QUESTIONS

The following instructions are for recording economic information regarding a particular vessel. This will require questioning the captain of the vessel for the information. Do not record assumptions. If the information is unclear, verify the answers with the captain.

If the captain is not the owner of the vessel, attempt to get some information from the owner before the trip. If questions remain at the end of the trip, you may be able to obtain the information over the phone after docking.

Information for fields #6-#8 and #15-#26 may not be available from the captain or owner during the trip if vessel records are maintained at home/office. If this is the case, provide captain/owner with the mail-in form and cover letter. Before giving the form to the captain or owner, complete the Header Information.

The Vessel and Trip Log - Six Month Questions Log should be completed at least **once every six months**. A list showing the vessel name and a date which is six months after the date these six month questions were last asked, will be mailed to you each month. If the DATE SAILED for this trip falls after the date on the list, record "Yes" (1) and complete a Vessel and Trip Log - Six Month Questions Log. If the DATE SAILED for this trip falls before the date on the list, record "No" (0) and do not complete a Vessel and Trip Log - Six Month Questions Log. Although this system is designed to reduce redundancy in your data collection, you may ask these questions more frequently than every six months. If in doubt, ask the questions.

Do not fill in any of these questions from memory of a prior trip. The questions should be asked each time the fields are completed so that any information that may have changed may be detected. If you know there has been a change that would be reflected in these questions, **ask all** of the six-month questions again, even if they were asked recently.

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field or check unknown. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No",

leave the field blank.

INSTRUCTIONS

For instructions on completing the Header Fields **A** and **B**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. YEAR BUILT: Record the four digit year this vessel was built. This information may be obtained from the captain, the vessel's fishing permit, or Coast Guard documentation papers.

2. VESSEL LENGTH: Record, in whole feet, the **total** length of this vessel. This information may be obtained from the captain, the vessel's fishing permit, or Coast Guard documentation papers.

3. GROSS REGISTERED TONNAGE: Record, in whole tons, the total Gross Registered Tonnage of this vessel. This information may be obtained from the captain, the vessel's fishing permit, or Coast Guard documentation papers.

4. HOLD CAPACITY: Record, in whole pounds, the amount of fish that can be stored in this vessel's hold. This information may be obtained from the captain, the vessel's fishing permit, or Coast Guard documentation papers.

NOTE: A fish hold is an area below deck specifically designed to store fish.

5. FUEL TYPE: Record the type of fuel used to power the vessel's engines by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Gasoline.
- 2 = Diesel.
- 3 = Number 2.

NOTE: If another fuel type is used, record it in COMMENTS.

ANNUAL INSURANCE COSTS

NOTE: If the captain or owner does not know

the breakdown amounts of the vessel's insurance for fields #6 and #7, but knows the total, complete only #8. Do not complete #8 if #6 and #7 are completed.

6. HULL: Record, to the nearest dollar, the **total** annual cost of the vessel owner's insurance for Hull coverage, *i.e.*, the amount paid by the owner for this category for one billing year.

7. PROTECTION AND INDEMNITY: Record, to the nearest dollar, the **total** annual cost of the vessel owner's insurance for Protection and Indemnity coverage, *i.e.*, the amount paid by the owner for this category for one billing year.

8. COMBINED: Record, to the nearest dollar, the **combined total** cost of the vessel owner's insurance for Hull and Protection and Indemnity coverage, *i.e.*, the amount paid by the owner for this category for one billing year.

ENGINES

NOTE: If two engines work together for **propulsion**, designate one engine as the main engine, and the other as the secondary engine.

9. SECONDARY ENGINE?: Record whether a secondary engine is used on this vessel for propulsion by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

10. YEAR BUILT: Record the four digit year the main and secondary engines were built.

11. HORSEPOWER: Record the horsepower of the main and secondary engines.

OWNERSHIP

12. CORPORATION?: Record whether the vessel owner is incorporated by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

NOTE: This question must be answered in addition to OWNERSHIP TYPE (#13) because many types of ownership may be incorporated.

13. TYPE: Record the type of vessel ownership by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Sole Owner/Operator, the captain is sole owner of the firm that owns the vessel.
- 2 = Partnership/Operator, the captain owns the vessel in partnership with another individual(s) or firm(s).
- 3 = Other Fishing Interest, a firm, predominantly in the fishing business, owns the vessel. The captain does not own the vessel, but is operating the vessel for the firm.
- 4 = Other Non-Fishing Interest, a firm, not predominantly in the fishing business, owns the vessel as an investment, *i.e.*, a group of dentists, lawyers, *etc.* The captain does not own the vessel but is operating the vessel for the firm.
- 5 = Sole Owner/Non-Operator, the sole owner has hired the captain to operate the vessel.
- 9 = Other, describe the vessel ownership type on line 13A.

ADDITIONAL VESSEL INFORMATION

14. CONSTRUCTION TYPE: Record the type of vessel hull construction by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Wood.
- 2 = Steel.
- 3 = Composite (combination of two or more materials), record the hull construction type on line 14A.
- 7 = Aluminum.
- 8 = Fiberglass.
- 9 = Other, record the hull construction type on line 14A.

REPAIR/MAINTENANCE COSTS FOR LAST 12 MONTHS

NOTE: Do not include costs incurred for the

purchase of new gear or equipment in fields #15-#20. Use your best judgement to decide whether an expense belongs in REPAIR/MAINTAIN (#15-#20) or REPLACE/ADD (#21-#26). Examples of gear repairs or maintenance include new gear **parts**, *i.e.*, an alternator, a headrope cable section, a section of a trawl net, rubber disks, *etc.*

NOTE: If no costs are incurred, record "0" in these fields.

15. ENGINES: Record, to the nearest dollar, the cost of **propulsion** engine repairs and/or maintenance made on the vessel **in the last 12 month period**.

NOTE: Do not include costs incurred for the purchase of any new or rebuilt engine not previously used on this vessel.

16. FISHING GEAR: Record, to the nearest dollar, the cost of fishing gear repairs and/or maintenance made on the vessel **in the last 12 month period**.

NOTE: Include costs incurred for the purchase of any **pieces** of gear units, *i.e.*, head rope cable, sections of trawl net, rubber disks, *etc.*

17. DECK GEAR: Record, to the nearest dollar, the cost of deck gear repairs and/or maintenance made on the vessel **in the last 12 month period**.

NOTE: Include costs incurred for the repair and maintenance of winches, booms, blocks, cables, *etc.*

18. PROCESSING AND REFRIGERATION EQUIPMENT: Record, to the nearest dollar, the cost of processing and refrigeration equipment repairs and/or maintenance made on the vessel **in the last 12 month period**.

NOTE: Include costs incurred for repair and maintenance of sorters, filleting machines and generators, or non-propulsion engines used for processing and refrigeration, *etc.*

19. ELECTRONICS: Record, to the nearest dollar, the cost of wheelhouse and gear mounted electronic equipment repairs and/or maintenance made on the vessel **in the last 12 month period**.

NOTE: Include costs incurred for repair and maintenance of radars, LORANs, plotters, depth sensors, pingers, *etc.*

20. OTHER: Record, to the nearest dollar, the cost of other vessel parts repairs and/or maintenance made on the vessel **in the last 12 month period**. Describe the items associated with these repair/maintenance costs on line 20A.

NOTE: "OTHER" is the entire vessel minus the engines, fishing gear, deck gear, processing and refrigeration equipment, and electronics.

NOTE: Include costs incurred for touch-up painting, repairing the galley stove, *etc.*

REPLACEMENT/ADD COSTS FOR LAST 12 MONTHS

NOTE: Do not record the costs incurred for repair or maintenance for existing gear items in these fields. Use your best judgement to decide whether an expense belongs in REPAIR/MAINTAIN (#15-#20) or REPLACE/ADD (#21-#26). Examples of gear replacements or additions include replacing the **entire gear or significant gear part** with another, *i.e.*, a trawl door, a gillnet panel, a lobster pot, *etc.*

NOTE: If no costs are incurred, record "0" in the appropriate field(s).

21. ENGINES: Record, to the nearest dollar, the cost of engine (**for propulsion only**) purchases and additions made for this vessel **in the last 12 month period**.

NOTE: Include the cost of "rebuilt" engines that have not previously been used on the vessel.

22. FISHING GEAR: Record, to the nearest dollar, the cost of fishing gear purchases and additions made for this vessel **in the last 12 month period**.

23. DECK GEAR: Record, to the nearest dollar, the cost of deck gear purchases and additions made for this vessel **in the last 12 month period**.

NOTE: Include the cost of replacing or add-

ing winches, booms, blocks, cables, *etc.*

24. PROCESSING AND REFRIGERATION EQUIPMENT: Record, to the nearest dollar, the cost of processing and refrigeration equipment purchases and additions made for this vessel **in the last 12 month period.**

NOTE: Include costs incurred for replacing or adding sorters, filleting machines, and generators or non-propulsion engines used for processing and refrigeration, *etc.*

25. ELECTRONICS: Record, to the nearest dollar, the cost of wheelhouse and gear mounted electronic equipment purchases and additions made for this vessel **in the last 12 month period.**

NOTE: Include the cost of replacing or adding radars, LORANs, plotters, depth sensors, pingers, *etc.*

26. OTHER: Record, to the nearest dollar, the cost of other vessel parts purchases and installments **in the last 12 month period.** Describe the items associated with these replacement/add costs on line 26A.

NOTE: "OTHER" is the entire vessel minus the engines, fishing gear, deck gear, processing and refrigeration equipment, and electronics.

EQUIPMENT INVENTORY

For fields #27, #30, #33, and #36, identify the type(s) of equipment located on the vessel, even if not currently being used. Some of these items are already listed on the log. A complete listing of these items may be found in Appendix H. Vessel Equipment Inventory Codes. If an item on the vessel is not on the log or in these listings, record the item and a count in one of the spaces provided on the log.

WHEELHOUSE ELECTRONICS

27. TYPE: Identify the type(s) of electronics located in the vessel's wheelhouse, even if not currently being used.

28. CODE: Leave this field blank.

29. COUNT: Record the number of units for each wheelhouse electronics item identified as being on the vessel.

GEAR MOUNTED ELECTRONICS

30. TYPE: Identify the type(s) of electronics mounted on the vessel's gear even if not currently being used.

31. CODE: Leave this field blank.

32. COUNT: Record the number of units for each gear mounted electronics item identified as being on the vessel.

PROCESSING EQUIPMENT

33. TYPE: Identify the type(s) of processing equipment on the vessel, even if not currently being used.

34. CODE: Leave this field blank.

35. COUNT: Record the number of units for each processing equipment item identified as being on the vessel.

REFRIGERATION/FREEZING EQUIPMENT

36. TYPE: Identify the type(s) of refrigeration/freezing equipment located on the vessel, even if not currently being used.

37. CODE: Leave this field blank.

38. COUNT: Record the number of units for each refrigeration/ freezing equipment item identified as being on the vessel.

COMMENTS

Record any additional information regarding the vessel or associated expenditures below. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM

VESSEL AND TRIP INFORMATION LOG - SIX MONTH QUESTIONS

| YEAR BUILT 1 | | LENGTH 2 ft | Gross Registered Tonnage 3 tn | HOLD CAPACITY 4 lbs | <table border="1"> <tr> <td>OBS/TRIP ID</td> <td colspan="2">A</td> </tr> <tr> <td>DATE LAND mm/yy</td> <td>B</td> <td>/</td> </tr> </table> | | | OBS/TRIP ID | A | | DATE LAND mm/yy | B | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------|---|--|--|--|---|-----------|--|------------------------|------|---------------------|-----------|-----------|--------------|-------|-----|--------------------------|--------------|-----|-----------|-----------|-----------|--|---------|-----|--|--------|-----|--|----------------|-----|--|------------------------|-----|--|-----------|-----|--|------------------------|-----|--|----------|-----|--|--------------|-----|--|--------------------------|-----|--|------------|-----|--|-------------------|-----|--|------------|-----|--|-----------|-----------|-----------|
| OBS/TRIP ID | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE LAND mm/yy | B | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FUEL TYPE: 5 Unknown 0___ Gasoline 1___ Diesel 2___ # 2 3___ | | ANNUAL INSURANCE COSTS Hull \$ ___ 6 ___ P & I \$ ___ 7 ___ OR Combined \$ ___ 8 ___ | | ENGINE SECONDARY? 9 No 0___ Yes 1___ YEAR BUILT Main 10 ___ Secondary ___ HORSEPOWER Main 11 ___ hp Secondary ___ hp | | EQUIPMENT INVENTORY <table border="1"> <thead> <tr> <th>WHEELHOUSE ELECTRONICS</th> <th>CODE</th> <th>COUNT</th> </tr> </thead> <tbody> <tr><td>Loran</td><td>901</td><td></td></tr> <tr><td>Radar</td><td>902</td><td></td></tr> <tr><td>Echo Sounder</td><td>903</td><td></td></tr> <tr><td>Fax</td><td>904</td><td></td></tr> <tr><td>Plotter</td><td>905</td><td></td></tr> <tr><td>G.P.S.</td><td>906</td><td></td></tr> <tr><td>Cellular Phone</td><td>907</td><td></td></tr> <tr><td>Vessel Tracking System</td><td>908</td><td></td></tr> <tr><td>VHF Radio</td><td>909</td><td></td></tr> <tr><td>Single Side Band Radio</td><td>927</td><td></td></tr> <tr><td>CB Radio</td><td>930</td><td></td></tr> <tr><td>Depth Sensor</td><td>931</td><td></td></tr> <tr><td>Water Temperature Sensor</td><td>932</td><td></td></tr> <tr><td>Wind Meter</td><td>918</td><td></td></tr> <tr><td>Personal Computer</td><td>925</td><td></td></tr> <tr><td>Auto pilot</td><td>922</td><td></td></tr> <tr> <td>27</td> <td>28</td> <td>29</td> </tr> </tbody> </table> | | | WHEELHOUSE ELECTRONICS | CODE | COUNT | Loran | 901 | | Radar | 902 | | Echo Sounder | 903 | | Fax | 904 | | Plotter | 905 | | G.P.S. | 906 | | Cellular Phone | 907 | | Vessel Tracking System | 908 | | VHF Radio | 909 | | Single Side Band Radio | 927 | | CB Radio | 930 | | Depth Sensor | 931 | | Water Temperature Sensor | 932 | | Wind Meter | 918 | | Personal Computer | 925 | | Auto pilot | 922 | | 27 | 28 | 29 |
| WHEELHOUSE ELECTRONICS | CODE | COUNT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loran | 901 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radar | 902 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Echo Sounder | 903 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fax | 904 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plotter | 905 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G.P.S. | 906 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cellular Phone | 907 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vessel Tracking System | 908 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VHF Radio | 909 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Single Side Band Radio | 927 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CB Radio | 930 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depth Sensor | 931 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Temperature Sensor | 932 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wind Meter | 918 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Personal Computer | 925 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Auto pilot | 922 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | 28 | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OWNERSHIP TYPE: CORPORATION? No 0 ___ 12 ___ Yes 1 ___ Unknown 13 0___ Sole Owner/Operator 1___ Partnership/Operator 2___ Other Fishing Interest 3___ Other Non-Fishing Interest 4___ Sole Owner/Non-Operator 5___ Other 9___ ___ 13A ___ | | CONSTRUCTION TYPE: 14 Unknown 0___ Wood 1___ Steel 2___ Composite 3___ Aluminum 7___ Fiberglass 8___ Other 9___ ___ 14A ___ | | REPAIR / MAINTENANCE COSTS (Previous 12 mo.) Engines \$ ___ 15 ___ Unknown ___ Fish Gear \$ ___ 16 ___ Unknown ___ Deck Gear \$ ___ 17 ___ Unknown ___ Proc/Refrig \$ ___ 18 ___ Unknown ___ Electronics \$ ___ 19 ___ Unknown ___ Other \$ ___ 20 ___ ___ 20A ___ | | REPLACEMENT / ADD COSTS (Previous 12 mo.) Engines \$ ___ 21 ___ Unknown ___ Fish Gear \$ ___ 22 ___ Unknown ___ Deck Gear \$ ___ 23 ___ Unknown ___ Proc/Refrig \$ ___ 24 ___ Unknown ___ Electronics \$ ___ 25 ___ Unknown ___ Other \$ ___ 26 ___ ___ 26A ___ | | GEAR MOUNTED ELECTRONICS <table border="1"> <tbody> <tr><td>Headrope Transducer</td><td>937</td><td></td></tr> <tr><td>Depth Sensor</td><td>938</td><td></td></tr> <tr><td>Water Temperature Sensor</td><td>939</td><td></td></tr> <tr> <td>30</td> <td>31</td> <td>32</td> </tr> </tbody> </table> | | | Headrope Transducer | 937 | | Depth Sensor | 938 | | Water Temperature Sensor | 939 | | 30 | 31 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Headrope Transducer | 937 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depth Sensor | 938 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Temperature Sensor | 939 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 31 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROCESSING <table border="1"> <tbody> <tr> <td>33</td> <td>34</td> <td>35</td> </tr> </tbody> </table> | | | | | 33 | 34 | 35 | REFRIGERATION/FREEZING <table border="1"> <tbody> <tr> <td>36</td> <td>37</td> <td>38</td> </tr> </tbody> </table> | | | 36 | 37 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | 34 | 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 37 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

IMPORTANCE OF COLLECTING ECONOMIC INFORMATION

- 1) The data is needed to analyze the economic costs and benefits of regulations. This enables fishery managers to compare alternatives.
- 2) Fishery managers need the analyses to give greater consideration to social and economic factors when forming and evaluating policies.
- 3) Such information is likely to reveal where, how, and why some measures will have differential impacts on different sectors of the industry.
- 4) Such information can also illustrate the economic importance of the fishing industry in a port or region.
- 5) The Observer Program provides economic data that is timely, covers many gear types, and is ongoing.

NMFS FISHERIES OBSERVER PROGRAM**VESSEL AND TRIP INFORMATION LOG - SIX MONTH QUESTIONS**

| | |
|-----------------|---------|
| OBS/TRIP ID | A74101- |
| DATE LAND mm/yy | 01 / 01 |

| | | | | | | |
|--------------------|-----------------|------------------------------------|------------------------------|--|-----|---|
| YEAR BUILT 1985 | LENGTH 82 ft | Gross Registered Tonnage 167 tn | HOLD CAPACITY 200,000 lbs | EQUIPMENT INVENTORY | | |
| | | | | WHEELHOUSE ELECTRONICS CODE COUNT | | |
| | | | | Loran | 901 | 2 |
| | | | | Radar | 902 | 2 |
| | | | | Echo Sounder | 903 | 2 |
| | | | | Fax | 904 | |
| | | | | Plotter | 905 | 2 |
| | | | | G.P.S. | 906 | 1 |
| | | | | Cellular Phone | 907 | 1 |
| | | | | Vessel Tracking System | 908 | 1 |
| | | | | VHF Radio | 909 | 5 |
| | | | | Single Side Band Radio | 927 | 1 |
| | | | | CB Radio | 930 | |
| | | | | Depth Sensor | 931 | |
| | | | | Water Temperature Sensor | 932 | 2 |
| | | | | Wind Meter | 918 | |
| | | | | Personal Computer | 925 | |
| | | | | Auto pilot | 922 | |
| | | | | | | |
| | | | | | | |
| | | | | GEAR MOUNTED ELECTRONICS | | |
| | | | | Headrope Transducer | 937 | |
| | | | | Depth Sensor | 938 | |
| | | | | Water Temperature Sensor | 939 | |
| | | | | | | |
| | | | | PROCESSING | | |
| | | | | | | |
| | | | | | | |
| | | | | REFRIGERATION/FREEZING | | |
| | | | | | | |
| | | | | | | |

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| | |
|-----------------|---|
| OBS/TRIP ID | |
| DATE LAND mm/yy | / |

| YEAR BUILT | | LENGTH ft | | Gross Registered Tonnage tn | HOLD CAPACITY lbs |
|----------------------------|-------------------------|---------------------------|---|---|--|
| FUEL TYPE: | | | | | |
| Unknown | 0__ | Hull | \$ _____ | ENGINE SECONDARY? No 0 ____ Yes 1 ____ | |
| Gasoline | 1__ | P & I | \$ _____ | YEAR BUILT Main _____ Secondary _____ | |
| Diesel | 2__ | | | HORSEPOWER Main _____ hp Secondary _____ hp | |
| # 2 | 3__ | Combined | \$ _____ | | |
| OWNERSHIP TYPE: | | CONSTRUCTION TYPE: | REPAIR / MAINTENANCE COSTS (Previous 12 mo.) | | REPLACEMENT / ADD COSTS (Previous 12 mo.) |
| CORPORATION? | No 0 ____ Yes 1 ____ | | | | |
| Unknown | 0__ | Unknown | 0__ | Engines \$ _____ Unknown _____ | Engines \$ _____ Unknown _____ |
| Sole Owner/Operator | 1__ | Wood | 1__ | Fish Gear \$ _____ Unknown _____ | Fish Gear \$ _____ Unknown _____ |
| Partnership/Operator | 2__ | Steel | 2__ | Deck Gear \$ _____ Unknown _____ | Deck Gear \$ _____ Unknown _____ |
| Other Fishing Interest | 3__ | Composite | 3__ | Proc/Refrig \$ _____ Unknown _____ | Proc/Refrig \$ _____ Unknown _____ |
| Other Non-Fishing Interest | 4__ | Aluminum | 7__ | Electronics \$ _____ Unknown _____ | Electronics \$ _____ Unknown _____ |
| Sole Owner/Non-Operator | 5__ | Fiberglass | 8__ | Other \$ _____ | Other \$ _____ |
| Other | 9__ | Other | 9__ | | |
| | | | | | |
| | | | | | |

| EQUIPMENT INVENTORY | | |
|---------------------------------|-------|--|
| WHEELHOUSE ELECTRONICS CODE | COUNT | |
| Loran | 901 | |
| Radar | 902 | |
| Echo Sounder | 903 | |
| Fax | 904 | |
| Plotter | 905 | |
| G.P.S. | 906 | |
| Cellular Phone | 907 | |
| Vessel Tracking System | 908 | |
| VHF Radio | 909 | |
| Single Side Band Radio | 927 | |
| CB Radio | 930 | |
| Depth Sensor | 931 | |
| Water Temperature Sensor | 932 | |
| Wind Meter | 918 | |
| Personal Computer | 925 | |
| Auto pilot | 922 | |
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| | | |
| PROCESSING | | |
| | | |
| | | |
| | | |
| REFRIGERATION/FREEZING | | |
| | | |
| | | |

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To Vessel Owners Participating in the NMFS' Observer Program:

Recently, an Observer from the National Marine Fisheries Service's Observer Program was onboard your vessel to collect information on certain aspects of the vessel's fishing activity. Answers to some of the economic questions were difficult to obtain because records are not typically kept aboard the vessel. To alleviate this problem, we ask that you please answer the questions on the attached form and mail it to:

Observer Program
NMFS/NEFSC
166 Water Street
Woods Hole, MA 02543.

Economic data regarding landings and trip costs are more available to the observer than the information you are providing. Data for the attached questions, on the other hand, can only be reliably provided by the vessel's owner. It is extremely important that fishery managers have a complete understanding of the economic constraints faced by commercial fishermen to insure that economic considerations are adequately addressed in regulatory decisions.

There are two parts of the questionnaire that relate to equipment expenditures. The first part asks for dollars spent adding or replacing whole units of equipment. Examples would be the cost of replacing a propulsion engine, adding a winch, replacing a LORAN, etc. Amounts for the first section should be dollars spent in the 12 months prior to the date recorded on the form under date loaded.

The second section asks for dollars spent repairing or maintaining the same categories of equipment. In the repair of equipment, sometimes certain parts are replaced. For example, an engine's alternator. These costs should be included in the REPAIR/MAINTENANCE category and not in the ADD/REPLACE category. Amounts recorded for the REPAIR/MAINTAIN category should be in dollars spent in the 12 months prior to the date recorded on the form under date loaded.

Be assured that the data you provide will be kept in the same confidential manner as all Fishery Sampling information. Thank you very much for your cooperation.

Northeast Fisheries Science Center

NMFS FISHERIES OBSERVER PROGRAM

| | | |
|-------------|-------------|---|
| OBS/TRIP ID | VESSEL NAME | DATE LANDED mm/dd/yy |
| | | / / |

Trip cost information was collected during the trip. Please help with these questions which could not be answered.

AMOUNTS SPENT PURCHASING ITEMS OVER THE PREVIOUS 12 MONTHS

NOTE: If no purchases were made, record a "0" on the appropriate line.

ENGINES (PROPULSION): INCLUDE THE COST OF A "REBUILT" ENGINE IF IT WAS NEVER USED BEFORE ON THIS VESSEL. DO NOT INCLUDE NEW ENGINE PARTS, SUCH AS ALTERNATORS. \$ _____

FISHING GEAR: INCLUDE WHOLE UNITS, SUCH AS TRAWL DOORS, GILLNET PANELS, AND LOBSTER POTS. DO NOT INCLUDE PIECES OF GEAR, SUCH AS RUBBER COOKIES OR PIECES OF TRAWL NET. \$ _____

DECK GEAR: INCLUDE WHOLE UNITS, SUCH AS WINCHES, BOOMS, BLOCKS, ETC. \$ _____

PROCESSING AND REFRIGERATION EQUIPMENT: INCLUDE SORTERS, FILLETING MACHINES, ETC., AS WELL AS GENERATORS AND ENGINES USED TO POWER THIS EQUIPMENT. \$ _____

ELECTRONICS: INCLUDE WHEELHOUSE AND GEAR MOUNTED ELECTRONICS. \$ _____

OTHER: INCLUDE ALL OTHER VESSEL PARTS. EXAMPLES: LENGTHENING THE VESSEL, PAINTING THE ENTIRE VESSEL, ADDING A HEAD, ETC. \$ _____

AMOUNTS SPENT REPAIRING & MAINTAINING ITEMS OVER THE PREVIOUS 12 MONTHS

NOTE: If no repairs or maintenance were done, record a "0" on the appropriate line.

ENGINES (PROPULSION): INCLUDE NEW ENGINE PARTS SUCH AS ALTERNATORS. INCLUDE THE COST OF REBUILDING AN ENGINE THAT WAS USED PREVIOUSLY ON THIS VESSEL. \$ _____

FISHING GEAR: INCLUDE THE COST OF NEW PIECES OF GEAR, SUCH AS HEADROPES, SECTIONS OF TRAWL NET, RUBBER COOKIES, ETC. \$ _____

DECK GEAR: EXAMPLES: REPAIRS AND MAINTENANCE TO WINCHES, BOOMS, BLOCKS, ETC. \$ _____

PROCESSING AND REFRIGERATION EQUIPMENT: INCLUDE REPAIRS AND MAINTENANCE TO SORTERS, FILLETING MACHINES, FREEZERS, ETC., AS WELL AS GENERATORS AND ENGINES USED TO POWER THIS EQUIPMENT. \$ _____

ELECTRONICS: INCLUDE REPAIRS AND MAINTENANCE TO WHEELHOUSE AND GEAR MOUNTED ELECTRONICS. \$ _____

OTHER: INCLUDE REPAIRS AND MAINTENANCE TO ALL OTHER VESSEL PARTS. EXAMPLES: TOUCH-UP PAINT, ADDING ZINCS TO THE HULL, REPAIRING THE HEAD, ETC. \$ _____

ANNUAL INSURANCE COSTS: HULL \$ _____ P & I \$ _____ OR COMBINED \$ _____
TO NEAREST DOLLAR, RECORD THE COST FOR HULL AND PROTECTION & INDEMNITY INSURANCE (OR BOTH COMBINED) FOR ONE BILLING YEAR.

ESTIMATE OF VESSEL VALUE: TO NEAREST THOUSAND DOLLARS, RECORD THE CURRENT MARKET VALUE OF THE VESSEL. THIS IS THE MAXIMUM PRICE AT WHICH THE VESSEL IS CERTAIN TO SELL WITHIN A SHORT PERIOD, NOT THE ASKING PRICE, OR LOWEST PRICE YOU WOULD ACCEPT. INCLUDE ALL CURRENT EQUIPMENT, GEAR, AND PERMITS. \$ _____

COMMENTS:

POLICY FOR DATA REQUESTS OF NMFS OBSERVER-OBTAINED INFORMATION

- 1) The only individuals who may request and receive data include: the owner(s), or the captain acting as an authorized representative for the owner(s), or a vessel participating in the National Marine Fisheries Service (NMFS) Observer Program. No other individuals may be issued any data under this policy.
- 2) Any data request must be submitted in writing on a form letter which may be obtained from a NMFS Observer, or the address below. Two signatures are required on this letter: that of the individual requesting the data, and that of the individual releasing the data. All letters must then be returned to the following address:

Chief, Fisheries Sampling Branch
National Marine Fisheries Service
Northeast Fisheries Science Center
166 Water Street
Woods Hole, MA 02543-1097

Any questions or other requests relating to data release should also be directed to the above address.

- 3) It should be understood that upon release of the requested data, the recipient then becomes responsible for it.
- 4) The individual signing the letter as the “releasor” must issue the information in compliance with this policy.
- 5) Data may not be released upon an oral request, or without first completing and signing the authorized release letter mentioned above.
- 6) Field diaries do not meet the specifications of releasable data under the policy. No field diaries may be copied for, or reviewed by, vessel owners or captains.
- 7) Release of data for trips in which more than 1 vessel participated (i.e. pair trawl trips) may only occur if both vessel owners or captains complete and sign data release letters.
- 8) Any requests for historical data (i.e. data that an observer has already mailed in) should be forwarded to the address above.
- 9) All letters should be completed in pen, not pencil.

(DATE OF REQUEST)

Chief, Fisheries Sampling Branch
 National Marine Fisheries Service
 Northeast Fisheries Science Center
 166 Water Street
 Woods Hole, MA 02543-1097

To Whom It May Concern:

I, _____, the _____
(PRINT COMPLETE NAME) **(OWNER AND/OR CAPTAIN)**

of the vessel, F/V _____, # _____,
(VESSEL NAME) **(USCGDOC#)**

would like to request and authorize a release of the National Marine Fisheries Service (NMFS) observer data, collected and recorded aboard my vessel by a NMFS observer, to myself.

The information I request is from _____ trip _____.
(FISHERY) **(OBS/TRIP ID)**

This trip landed in _____ on _____.
(PORT CITY, STATE) **(DATE LANDED)**

I am making this request as the owner, or the authorized representative of the owner(s), of said vessel. I understand that I am responsible for these data upon release. I further understand that the data I receive may be preliminary, and not yet completely reviewed.

**ADDRESS TO WHICH REQUESTED
 DATA SHOULD BE SENT
 (IF NOT RECEIVED DIRECTLY):**

Sincerely,

(SIGNED NAME)

(PRINTED NAME)

OBSERVERS / DATA RELEASERS

Please check that all of the above information is complete, and correctly and legibly recorded.

Date requested data were copied and issued _____

Signature of data releasor _____

Printed name of data releasor _____

EXAMPLE

02/14/01
(DATE OF REQUEST)

Chief, Fisheries Sampling Branch
National Marine Fisheries Service
Northeast Fisheries Science Center
166 Water Street
Woods Hole, MA 02543-1097

To Whom It May Concern:

I, JOHN SMITH, the OWNER AND CAPTAIN
(PRINT COMPLETE NAME) (OWNER AND/OR CAPTAIN)

of the vessel, F/V JO JO, # 1234567,
(VESSEL NAME) (USCGDOC#)

would like to request and authorize a release of the National Marine Fisheries Service (NMFS) observer data, collected and recorded aboard my vessel by a NMFS observer, to myself.

The information I request is from SINK GILLNET trip A02002L.
(FISHERY) (OBS/TRIP ID)

This trip landed in Gloucester, MA on 02/14/01.
(PORT CITY, STATE) (DATE LANDED)

I am making this request as the owner, or the authorized representative of the owner(s), of said vessel. I understand that I am responsible for these data upon release. I further understand that the data I receive may be preliminary, and not yet completely reviewed.

**ADDRESS TO WHICH REQUESTED
DATA SHOULD BE SENT
(IF NOT RECEIVED DIRECTLY):**

Sincerely,

PO Box 1234

Gloucester, MA 01930

John Smith
(SIGNED NAME)

John Smith
(PRINTED NAME)

OBSERVERS / DATA RELEASERS

Please check that all of the above information is complete, and correctly and legibly recorded.

Date requested data were copied and issued _____

Signature of data releasor _____

Printed name of data releasor _____

COMMON HAUL LOG DATA

INSTRUCTIONS

A. OBSERVER/TRIP IDENTIFIER: Record your three character Observer Identifier combined with the three character Trip Number and one character Trip Extension assigned to you for this trip. This combined number is the number recorded on the Vessel and Trip Information Log. Use this Observer/Trip Identifier on all forms for this trip. Use Table 1 to determine the correct trip extension. For further instructions and specific examples on completing this field refer to Appendix F. Observer/Trip Identifier Instructions.

| Extension | Trip Type |
|-----------|--|
| A | Aborted (non-gillnet) |
| C | Gillnet, complete fish sampling |
| D | Gillnet, complete fish sampling, aborted |
| L | Gillnet, limited fish sampling |
| M | Gillnet, limited fish sampling, aborted |
| -- | All other* |

Table 1.

Example: Observer Green, who has been assigned identifier A02, is on her second trip of the calendar year, and it is a limited fish sampling gillnet trip. The observer/trip identifier is recorded as A02002L.

B. DATE LANDED: Record the month and year that the vessel first arrives in port at the completion of this deployment as recorded on the Vessel and Trip Information Log. Record this date whether or not the catch is sold.

Example: 02/01.

C. PAGE NUMBER: Depending on the log, pages are numbered on a per trip or per haul basis. Table 2 provides a brief summary. For specific examples, see Appendix G. Page Numbering Instructions.

NOTE: Haul Logs are a "cover" sheet for the following other logs (listed in the or-

der of ordering/numbering): Individual Animal Log, Length Frequency Log, Crustacean Sample Log.

| Per Trip |
|---|
| Scallop Dredge Off-Watch Haul Log |
| Marine Mammal, Sea Turtle and Debris Sighting Log |
| Incidental Take Log |
| Marine Mammal Sample Log |
| Sea Turtle Sample Log |
| Per Haul |
| Haul Log (all) |
| Individual Animal Log |
| Length Frequency Log |
| Crustacean Sample Log |

Table 2.

D. GEAR CODE: Indicate the type of gear fished by recording the appropriate three digit code as listed in Appendix D. Gear Codes.

E. HAUL NUMBER: Record the haul number each time gear is hauled on this trip. Start with "1" for the first haul, and continue numbering sequentially for the following hauls.

F. HAUL OBSERVED?: Record whether this haul is observed by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

NOTE: An observed haul is defined as one where all of the catch is recorded, regardless of whether it is kept or discarded. An unobserved haul is defined as one where complete discard information from the haul is not collected. Discard data is collected only for incidental takes and those species that are recorded on the Individual Animal Log. A haul may be unobserved because an observer is conducting a

marine mammal haul watch, or is below deck for weather related safety reasons, illness, *etc.* **Do not record any discard information for unobserved hauls on haul logs.**

G. CATCH?: Record whether the gear from this haul holds any catch, whether it is kept or discarded, by placing an “X” next to the appropriate code:

0 = No.

1 = Yes.

H. INCIDENTAL TAKE?: Record whether a marine mammal, sea turtle, or sea bird is caught by the gear in this haul by placing an “X” next to the appropriate code:

0 = No.

1 = Yes. If “Yes”, complete a Marine Mammal, Sea Turtle and Sea Bird Incidental Take Log.

I. WEATHER: Indicate the weather at the beginning of the haul by recording the most appropriate two digit code listed in Appendix K. Weather Codes.

J. WIND SPEED: Record, in whole knots, the wind speed at the beginning of this haul. If there is no wind, record “0”.

NOTE: This is **not** a range.

K. WIND DIRECTION: Record, in compass degrees (0°-359°), the direction from which the wind is blowing at the beginning of this haul. If there is no wind, record “-” (a dash).

L. WAVE HEIGHT: Record, in whole feet, the wave height at the beginning of this haul. If the wave height is less than six inches, record “0”.

NOTE: This is **not** a range.

M. BOTTOM DEPTH: Record, in whole fathoms, the water depth at the beginning of this haul.

NOTE: This is **not** a range.

N. BEGIN/END LATITUDE/LONGITUDE OR LORAN: Record the latitude and longitude location, to the **tenth of a minute**, where the set/haul began and ended. If the latitude and longitude location is given in seconds, convert them to tenths of minutes. If latitude

and longitude positions are not available, record the LORAN stations and bearings.

NOTE: See Appendix Q. Conversion Tables for a list of second ranges and corresponding conversions to tenths of minutes.

NOTE: This information can be obtained from the captain's logbook or plotter if the set is not observed.

NOTE: If **neither** latitude/longitude or LORAN positions are available, record the statistical area as listed in Appendix E.1. Map of Statistical Areas of the Northeast U.S. or Appendix E.2. Map of Statistical Areas of the Southeast U.S.

Example: 35 23.4 75 16.7 or
9960X 27054 9960Y 41824

NOTE: While **9960-** loran chains are the most frequently used chains within this program's jurisdiction, in extreme northern and southern areas other chains may be used, such as:
Southern North Carolina: **7980-**
Canadian: **5930-**

O. TARGET SPECIES: Indicate the principal species, or species group sought in this haul by recording the most appropriate and specific **species name(s)** possible as listed in Appendix A. Species Names. This information must be obtained from the captain, but should be asked before the gear is hauled, and **not** based on the results of this haul's catch.

Examples: Cod
Monkfish
Weakfish & Croaker

P. TARGET SPECIES CODE: Leave this field blank.

Q. SPECIES NAME: Record the **complete** common name of each species or debris item caught in this haul as listed in Appendix A. Species Names.

Examples: Winter skate wings
Spiny dogfish
Summer flounder
Debris, Fish Gear

NOTE: For a list of species and the log(s) on which to record them see Appendix R.

Species List and Corresponding Logs.

R. SPECIES CODE: Leave this field blank.

S. CATCH DISPOSITION: Indicate whether the weight recorded in POUNDS (T) is kept or discarded by recording the appropriate alpha abbreviation:

K = Kept.

D = Discarded.

T. POUNDS: Record the dressed or round, actual or estimated haul weight for each caught species listed in SPECIES NAME (Q). Record this weight in the most accurate form possible, *i.e.* if a species is gutted at sea, record a dressed weight for this species. The observer's actual weight should be recorded whenever possible.

NOTE: Actual weights may be recorded to the nearest **tenth** of a pound if reasonable. Estimated weights greater than one pound should be recorded to the nearest whole pound.

NOTE: Kept is defined as brought on board the vessel and retained for market or consumptive purposes.

NOTE: If a fish is "**upgraded**" or "**high graded**", and a previously kept fish is discarded and replaced with one that is larger (or of higher quality/value), record the discarded animal(s) and POUNDS discarded on the Haul Log corresponding to the haul in which the animal(s) was (were) originally caught, and code it 062 for FISH DISPOSITION (U). Be sure to subtract the weight of the animal(s) from the original POUNDS kept record. Upgrading may result in dressed discard weights. Upgrading is typically done with swordfish and tuna, but may also occur with other fish species.

NOTE: When a **fish** is discarded by the vessel, **but retained whole by the observer**, for scientific purposes, *i.e.* species identification, record the discarded fish weight next to the correct species name, and code it 007 for FISH DISPOSITION (U).

U. FISH DISPOSITION: Indicate the disposition

of each species listed in SPECIES NAME (Q) by recording the most appropriate three digit code listed in Appendix B. Fish Disposition Codes.

NOTE: If more than one discard reason applies to a discarded species, separate the species onto two or more lines, and record the appropriate weights and discard reasons for each. However, if there is one overriding reason for the discard of all animals of a species group, do not attempt to break this group into smaller discard reason groups.

Examples: Any lobster caught in Maine in non-pot gear is discarded because "Regulations prohibit retention, no quota in area" (015). Of the 500 lbs of Cod discarded, 400 lbs are discarded because they are of poor quality due to hagfish damage (036), and 100 lbs are discarded because regulations prohibit their retention because they are too small (012).

WEIGHT TYPE CLASSIFICATION

NOTE: If more than one weight type classification applies to a species, separate the species onto two or more lines, and record the appropriate weights and weight type classification codes for each.

V. DRESSED OR ROUND: Indicate whether the weight recorded in POUNDS (T) is a dressed or round weight by recording the appropriate letter code:

D = Dressed.

R = Round.

NOTE: Shark fins, skate wings, monkfish livers and fish chunks should be coded "D" for dressed.

W. ACTUAL OR ESTIMATED: Indicate whether the weight recorded in POUNDS (T) is an actual or estimated weight by recording the appropriate letter code:

A = Actual.

E = Estimated.

NOTE: Actual = all fish, or shellfish, weighed
with a scale.

| | |
|-------------------|-------------|
| OBS/ TRIP ID | A |
| DATE LAND (mm/yy) | B / |
| PAGE # | C OF |

[illegible]

NMFS FISHERIES OBSERVER PROGRAM
"GENERIC" HAUL LOG

| | |
|-------------------|----|
| OBS/ TRIP ID | |
| DATE LAND (mm/yy) | / |
| PAGE # | OF |

| | | | | | | | | | | | | |
|------------------|-------|--------|--------------------------------------|---|--|--------------------------------------|--------------|---|----------------|-------------------|-------------------------|--|
| GEAR CODE | | HAUL # | HAUL OBS? NO 0 ____ YES 1 ____ | | CATCH? NO 0 ____ YES 1 ____ | INC TAKE? NO 0 ____ YES 1 ____ | WEATHER CODE | WIND SPEED DIRECTION kn o | | WAVE HEIGHT ft | DEPTH, HAUL BEGIN fm | |
| SET INFO | | | | | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TARGET SPECIES | | CODE(S) | |
| S E T | BEGIN | / | / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | | | | |
| | END | / | / | : | 9960 - | | 9960 - | | | | | |
| | | / | / | : | 9960 - | | 9960 - | | | | | |
| | | / | / | : | 9960 - | | 9960 - | | | | | |
| HAUL INFO | | | | | | | | | | | | |
| H A U L | BEGIN | / | / | : | 9960 - | | 9960 - | | | | | |
| | END | / | / | : | 9960 - | | 9960 - | | | | | |

COMMENTS

| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
|---------|------|------------|--------|------|--------|-----|---------|------|------------|--------|------|--------|-----|
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
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GILLNET GEAR CHARACTERISTICS LOG

This log contains detailed questions about the gear fished. Complete a new log for each uniquely configured gear (as defined below) **hailed** during a trip. These unique configurations may be based on variables such as number of nets per gear, floatline length, anchor weight, *etc.* Any changes in these fields will require completion of a new Gillnet Gear Characteristics Log. Number each gear configuration sequentially.

If the gear is set out and hauled more than once during a trip, do not complete a new Gillnet Gear Characteristics Log for the multiple hauls. Rather, record on the Gillnet Haul Log which gear numbers are being hauled. In addition, record any other information necessary to understand the manner in which the gear was set/hailed in COMMENTS.

If the vessel has two or more identical gears which are hauled separately, complete only one Gillnet Gear Characteristics Log and record the consecutively assigned numbers of all identical gears described in GEAR NUMBER(S) (#1). See the gillnet definitions below and GEAR NUMBER(S) (#1) for more information on defining and numbering gears.

If information is unavailable or unknown to any question except a “No/Yes” question, record a dash (-) in the field. If the answer to a “No/Yes” question is unknown, record a “9” on the line next to the code for “No” to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered “No”, leave the field blank.

This log should be used to describe all types of gillnet gear except Pelagic Drift Gillnet.

Become familiar with the following definitions.

DEFINITIONS

Gillnet: A vertical wall of netting, typically stretched between a weighted leadline on the bottom and a floatline, with or without floats, on the top to support it vertically in the water column.

Space: A space greater than 2.0 feet between nets, continuous from the floatline to the leadline. This space may be caused by the way in which the net bridles are attached.

Bridles: The trailing ends of the floatline and

leadline on an individual net.

Gear: A gillnet, or series of gillnets connected by bridles, with or without spaces in between, commonly referred to as “the string”.

Dropline: A line that connects the floats on the water's surface to the mainline/floatline.

Droplines are used along the entire string to suspend the gear in the water column.

INSTRUCTIONS

For instructions on completing the Header Fields **A**, **B**, and **D**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

GEAR INFORMATION

NOTE: Record in COMMENTS any calculations used to answer any of the following questions.

1. GEAR NUMBER(S): Record the consecutive number(s) assigned to each uniquely configured gear hauled and for which characteristics are described. See the definition of gear in the introduction.

NOTE: If two or more identical gears are used, assign consecutive numbers to each gear and record all of these numbers on one Gillnet Gear Characteristics Log.

Example: The first uniquely configured gear is “1”, and its characteristics will be recorded on one Gillnet Gear Characteristics Log. The next two **identical** gears are “2, 3”, and their identical characteristics will be recorded on a second Gillnet Gear Characteristics Log.

NOTE: Gears should be numbered consecutively according to the order in which they are hauled aboard the vessel to which you are deployed.

Example: First gear hauled is “1”, next gear hauled is “2”, *etc.*

2. NUMBER OF NETS: Record the **total** number of individual nets used in this gear.

NET CHARACTERISTICS

NOTE: The questions asked in this section only, describe a **single, average net**, from the many that may be put together to make up this gear. Since each gear is not always made up of uniform nets, provide an **average**, when necessary.

3. LENGTH: Record, in whole feet, the **average** horizontal distance of a net on this gear, as measured along the floatline. This information may be obtained from the captain.

NOTE: If there is a space between two nets, **do not** include this distance in the net length.

4. HEIGHT: Record, to the nearest tenth of a foot, the **average** height of a net in this gear. This value is obtained by measuring the length of the endline on the end of a net where the meshes are attached. This information may be obtained from the Captain.

5. MESH COUNT, VERTICAL: Record the **average** number of vertical meshes of a net in this gear. This information may be obtained from the captain.

GEAR CHARACTERISTICS

NOTE: The following fields characterize the **entire gear, i.e. the string**, and not just one net.

6. HANGING RATIO: Record the average fractional ratio of the length of the floatline for one net to the length that the net would be if it was taken off the floatline and stretched out. This value can be calculated by counting 10 or 12 meshes horizontally, measuring the length of the floatline they are attached to, and comparing that distance to the stretched out length of the meshes. This information may be obtained from the captain.

Example: If the stretched out distance of the meshes is two times the length of the floatline, record "1/2".

TWINE SIZE

7. NUMBER: Record the twine size number (industry standard) of the net webbing used in this gear. This information may be obtained using a twine size measuring tool provided by the NEFSC Observer Program or contractor. This information may also be obtained from the captain. **An average should not be recorded here.** See Appendix Q. Conversion Tables for a listing of industry standard twine size numbers and their corresponding diameters.

NOTE: This number should reflect the total diameter of the net webbing, and not the diameter of an individual strand which may be twisted with other strands to create the net webbing.

NOTE: If more than one twine size is used within one gear, record 998, combination, and indicate the twine sizes used in COMMENTS.

8. ACTUAL OR ESTIMATED: Record whether the number recorded in TWINE SIZE NUMBER (#7) is an actual or an estimated value by circling the appropriate letter code:

A = Actual.

E = Estimated.

NOTE: An **actual twine size number** is obtained using a twine size measuring tool provided by the NEFSC Observer Program or contractor. An **estimated twine size number** is provided by the captain.

9. NUMBER OF STRANDS: Record the number of strands of twine in the net webbing used in this gear. **An average should not be recorded here.** If more than one number is used, record the number of strands used in the greatest number of nets in this gear. If more than one number is used AND each number is used in an equal number of nets in the gear, record a dash (-) and indicate the numbers of strands in COMMENTS. This information may be obtained from the captain.

NOTE: This number should reflect the total number of individual strands used to make up the net webbing.

Example: Monofilament has 1 strand.

10. MATERIAL: Record the material of the net webbing used in this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Nylon.
- 9 = Other, record the net webbing material on line 10A.

NOTE: This information may be obtained from the captain.

NOTE: If more than one net material is used in the string, check other and indicate the materials used on the line provided.

NOTE: Monofilament gillnet is typically made of nylon.

11. FLOATLINE MATERIAL: Record the material of the floatline used in this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Floating (with a foam core).
- 2 = Twisted Polypropylene.
- 9 = Other, record the floatline material on line 11A.

12. LEADLINE WEIGHT: Record, to the nearest tenth of a pound, the weight of the leadline used in **an average net** of this gear. This information may be obtained from the captain.

NOTE: If all nets are not a uniform length, record the leadline weight per net as a weighted average and describe in COMMENTS.

Example: A gear has 5 nets. Three nets are 300 feet long, the leadline weight for these nets is 80 lbs each. Two nets are 200 feet long, leadline weight is 70 lbs each. Leadline weight for the gear should be recorded as:

$$[(80*3) + (70*2)] \div 5 = 76$$

76.0 lbs.

FLOATS

13. USED?: Record whether floats are used on this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

14. DISTANCE BETWEEN: Record, in whole feet, the **average** distance along the floatline between floats used on this gear. This information may be obtained from the captain.

TIEDOWNS

15. USED?: Record whether tiedowns are used in this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes, **all** nets.
- 2 = Yes, but **not all** nets; record the number of nets using tiedowns in COMMENTS.

16. LENGTH: Record, to the nearest tenth of a foot, the average length of the tiedowns used in this gear. This information may be obtained from the Captain.

SPACE(S) BETWEEN NETS

17. USED?: Record whether there is (are) any continuous space(s) **greater than or equal to 2.5 feet** between the nets in this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes, describe the space(s) in COMMENTS.

18. NUMBER: Record the **total** number of spaces used between the nets in this gear.

19. WIDTH: Record, to the nearest foot, the **average** width of the space(s) used between the nets in this gear.

Example: A gillnet string has ten nets with 9 spaces. Three of these spaces are approximately 3.5 feet wide and 6 spaces are approximately 4.5 feet wide. The average width for these spaces should be recorded as:

$$[(3*3.5) + (6*4.5)] \div 9 = (10.5+27) \div 9 = 37.5 \div 9 = 4.2$$

Round 4.2 to 4 feet.

DROPLINES

20. USED?: Record whether droplines are used in this gear by placing an "X" next to the appropriate code:

- 0 = No.
1 = Yes.

21. LENGTH: Record, in whole feet, the length of the droplines used in this gear. This length is the distance from the floats (at the water's surface) to the nets. This information may be obtained from the captain.

ADDITIONAL WEIGHTS

22. USED?: Record whether any additional weights are used on the leadline of this gear by placing an "X" next to the appropriate code:

- 0 = No.
1 = Yes.

23. WEIGHT: Record, in whole pounds, the **total** weight of the additional weights used on the leadline of this gear. Do **not** include the weight of the leadline itself.

ANCHOR

24. USED?: Record whether any anchors are used on this gear by placing an "X" next to the appropriate code:

- 0 = No.
1 = Yes.

25. NUMBER: Record the number of anchors used on this gear.

26. WEIGHT: Record, in whole pounds, the **total** weight of the anchor(s) used to hold this gear in place. This information may be obtained from the captain.

27. WEIGHT - ACTUAL OR ESTIMATED: Record whether the weight recorded in #26 is an actual or estimated weight by placing an "X" next to the appropriate code:

- 1 = Actual.
2 = Estimated.

28. SECURING METHOD(S): Indicate the manner in which this gear is secured by placing an "X" next to the appropriate code:

- 1 = None.
2 = Ocean Bottom.

- 3 = Vessel and Ocean Bottom.
4 = Tied to Vessel Only.

ACTIVE MARINE MAMMAL DETERRENT DEVICES

An "active" marine mammal deterrent device is a device which emits sound which may be detected by a marine mammal.

29. USED?: Record whether "active" marine mammal deterrent devices (*i.e.* pingers) were on this gear **when it was set** by placing an "X" next to the appropriate code:

- 0 = No.
1 = Yes.

30. NUMBER: Record the number of active marine mammal deterrent devices (*i.e.* pingers) on the gear **when it was set**. This information can be obtained from the captain if the set is not observed.

31. BRAND: Record the brand of active marine mammal deterrent devices used on this gear. If more than one brand of active deterrent devices are used, record the brand of the majority of the active deterrent devices on the gear. If an equal number of different active deterrent device brands are used, record a dash (-) and indicate the brands in COMMENTS.

Examples: Dukane.
Airmar.

32. FREQUENCY: Record the frequency of the active marine mammal deterrent devices used on this gear in kilohertz (kHz). If more than one frequency of active deterrent device is used, record the frequency of the majority of the active deterrent devices on the gear. If an equal number of different frequency active deterrent devices are used, record the highest frequency used.

Example: 10kHz.

PASSIVE MARINE MAMMAL DETERRENT DEVICES

A "passive" marine mammal deterrent device is a device which may provide reflection of marine mammal echolocation signals.

33. USED?: Record whether "passive" marine mam-

mal deterrent devices were on this gear **when it was set** by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

Example: Net material that is designed to be more acoustically visible to marine mammals.

34. NUMBER: Record the number of passive marine mammal deterrent devices on the gear **when it was set**. This information can be obtained from the captain if the set is not observed.

NOTE: If some or all of the nets in the gear are made from material that is designed to be more acoustically visible to marine mammals, record the **number of nets** within the gear made from this material.

MESH SIZE

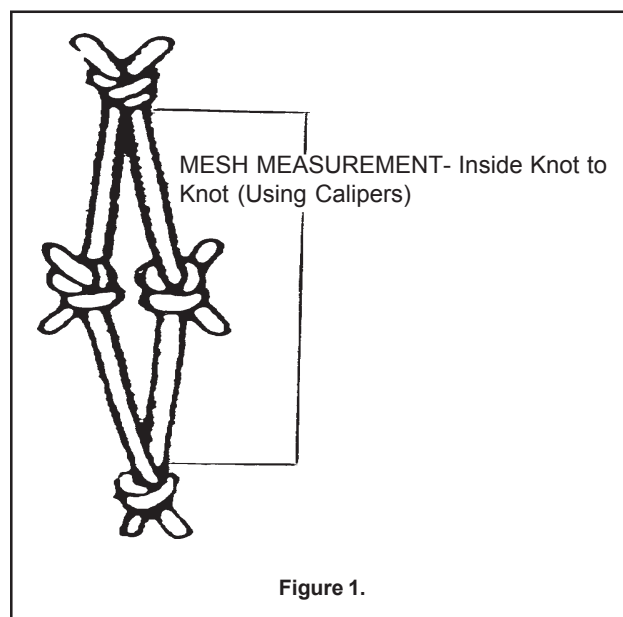
NOTE: Whenever possible complete field #'s 35 and 36. Field #37 may be completed when information for field #'s 35 and 36 is not available. Do not complete all three fields.

35. NUMBER OF NETS AT EACH MESH SIZE: Complete the table by recording the number of nets, and their corresponding mesh size, to the nearest hundredth of an inch. This value may be obtained by measuring a stretched mesh using calipers. This measurement should be taken inside, from knot to knot, in the direction in which the mesh is hung. See Figure 1 and Appendix P. Vernier Caliper Instructions for further information. This information may also be obtained from the captain.

NOTE: If this information is unavailable, complete MESH SIZE RANGE (#37) instead.

NOTE: If this information is obtained from the captain, make sure the value given is stretched length, not bar length. Stretched length is approximately twice the bar length. Ex: 1.25 in. mesh bar length, would equal approximately 2.50 in. mesh stretched.

Example: 3 nets at 6.25 inch mesh, 3 nets at 6.50 inch mesh.



36. ACTUAL/ESTIMATED: Indicate whether the net mesh size(s) recorded in NUMBER OF NETS AT EACH MESH SIZE (#35) is (are) an actual or estimated measurement(s) by circling the appropriate letter:

A = Actual.

E = Estimated.

NOTE: An **actual** mesh size measurement is obtained using calipers. See NUMBER OF NETS AT EACH MESH SIZE (#35) for measurement instructions. An **estimated** mesh size measurement is provided by the captain.

NOTE: The observer should obtain **at least** one actual measurement per mesh size category, for each unique gear configuration. If the observer is unable to obtain (an) actual measurement(s), record the reason in COMMENTS.

Example: The captain states that in a string of 10 nets, 5 are at 5 inches and 5 are at 5.25 inches. Using calipers, the observer should take at least one mesh size measurement from a net in the 5

| # NETS | MESH SIZE in. |
|--------|---------------|
| 1 | 5.28 |
| 4 | 5.25 |
| 1 | 5.03 |
| 4 | 5.00 |

(A) / E
A / (E)
(A) / E
A / (E)

inch mesh size section and at least one other measurement from a net in the 5.25 inch section.

37. MESH SIZE RANGE: Record, to the nearest hundredth of an inch, the minimum and maximum mesh sizes used in this gear. This information may be calculated as described above, or obtained from the captain.

NOTE: Do not complete this field if you have completed field #35.

38. COLOR: Record the color of the net webbing used in this gear by placing an “X” next to the appropriate code:

- 00 = Unknown.
- 01 = Clear.
- 02 = White.
- 03 = Pink.
- 04 = Black.
- 05 = Green.
- 06 = Blue.
- 07 = Multi-color, record all net webbing colors on line 38A.
- 08 = Red.
- 09 = Orange.
- 10 = Purple.
- 98 = Combination, record all net webbing colors on line 38A.
- 99 = Other, record the color on line 38A.

NOTE: “Multi-color” = 07, should be used **only** if more than 1 color of webbing is used within **one** net.

NOTE: “Combination” = 98, should be used if more than 1 color of net is used within this gear.

Example: A string of 20 nets, 10 of which are red and 10 of which are blue would be coded 98, and “10-red, 10-blue” recorded on line 38A.

COMMENTS

Record any additional information about this gear, *i.e.* a description of the space(s) between nets, methods of setting/hauling the gear. If more room is needed, use the back of this log, making sure to write “See Back” on the front of the log. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM
GILLNET GEAR LOG

| | |
|-------------------|------------|
| OBS/ TRIP ID | A |
| DATE LAND (mm/yy) | B / |

| GEAR CODE | GEAR NUMBER(S) | NUMBER OF NETS |
|------------------------------|--|----------------|
| D | 1 | 2 |
| AVERAGE NET: | USED? NO YES MEASUREMENTS | |
| LENGTH <u>3</u> ft | FLOATS 13 0__ 1__ Dist Between <u>14</u> ft | |
| HEIGHT <u>4</u> ft | TIE DOWNS 15 0__ 1__ (all nets) Length <u>16</u> ft 2__ (not all nets) | |
| MESH COUNT | SPACE(S) | |
| VERTICAL <u>5</u> | BETWEEN 17 0__ 1__ Number <u>18</u> | |
| | NETS | |
| HANGING | | |
| RATIO <u>6</u> / | | |
| TWINE (CIRCLE ONE) | | |
| SIZE <u>7</u> A / E | DROPLINES 20 0__ 1__ Length <u>21</u> ft | |
| 8 | ADDITIONAL WTS 22 0__ 1__ Weight <u>23</u> lbs | |
| # STRANDS <u>9</u> | ANCHOR(S) 24 0__ 1__ Number <u>25</u> | |
| NET MATERIAL 10 | | |
| Unknown 0__ | | |
| Nylon 1__ | | |
| Other 9__ 10A | | |
| FLOATLINE MATERIAL 11 | | |
| Unknown 0__ | | |
| Floating (foam core) 1__ | | |
| Twisted Polypropylene 2__ | | |
| Other 9__ 11A | | |
| LEADLINE WEIGHT | | |
| <u>12</u> lbs/ net | | |
| COMMENTS | | |

| # OF NETS | MESH SIZE in | (CIRCLE ONE) | COLOR 38 |
|-----------|--------------|-----------------|------------------|
| 35 | . | A / E 36 | Unknown 00__ |
| | . | A / E | Clear 01__ |
| | . | A / E | White 02__ |
| | . | A / E | Pink 03__ |
| | . | A / E | Black 04__ |
| | . | A / E | Green 05__ |
| | . | A / E | Blue 06__ |
| | . | A / E | Multi-color 07__ |
| | . | A / E | Red 08__ |
| | . | A / E | Orange 09__ |
| | . | A / E | Purple 10__ |
| | . | A / E | Combination 98__ |
| | . | A / E | Other 99__ |

| OR | MESH SIZE RANGE 37 | 38A |
|----|---------------------------|------------|
| | | |

(diagram for reference only)

The diagram illustrates the deployment of gillnet gear. Two rectangular nets are shown, separated by a 'Space'. Each net has a 'Float Line' at the top with floats. 'Tie Downs' are shown at the bottom of the nets. A 'HIGHFLIER' is indicated by an arrow pointing to a float. The 'Water Line' is shown at the top. The 'End Line' and 'Lead Line' are shown on the left. An 'Anchor' is shown on the right, connected to the lead line. The gear is labeled 'GEAR' and the nets are labeled 'NET'.

NMFS FISHERIES OBSERVER PROGRAM
GILLNET GEAR LOG

| | |
|-------------------|---------|
| OBS/ TRIP ID | S03089C |
| DATE LAND (mm/yy) | 10 / 01 |

| | | | | |
|----------------------------------|----------------------------------|------------|---|-------------------------------|
| GEAR CODE 100 | GEAR NUMBER(S) 1,2,3,4 | | NUMBER OF NETS 15 | |
| AVERAGE NET: | USED? | NO | YES | MEASUREMENTS |
| LENGTH <u>300</u> ft | FLOATS | 0 | 1 <u>X</u> | Dist Between <u>5</u> ft |
| HEIGHT <u>10</u> . <u>0</u> ft | TIE DOWNS | 0 | 1 <u>X</u> (all nets) 2 (not all nets) | Length <u>4</u> . <u>0</u> ft |
| MESH COUNT | SPACE(S) | | | |
| VERTICAL <u>45</u> | BETWEEN | 0 | 1 <u>X</u> | Number <u>14</u> |
| | NETS | | | Width <u>3</u> ft |
| HANGING | | | | Length |
| RATIO <u>1</u> / <u>3</u> | DROPLINES | 0 | <u>X</u> 1 | Weight |
| TWINE (CIRCLE ONE) | ADDITIONAL WTS | 0 | <u>X</u> 1 | Weight |
| SIZE <u>24</u> A / <u>(E)</u> | ANCHOR(S) | 0 | 1 <u>X</u> | Number <u>2</u> |
| # STRANDS <u>1</u> | | | | Weight <u>100</u> lbs |
| NET MATERIAL | | | | Actual |
| Unknown 0 | | | | Estimated |
| Nylon 1 <u>X</u> | | | | 2 <u>X</u> |
| Other 9 | | | | |
| | SECURING METHOD(S) | 1 | | None |
| | | 2 <u>X</u> | | Ocean Bottom |
| FLOATLINE MATERIAL | | 3 | | Vessel / Ocean Bottom |
| Unknown 0 | | 4 | | Vessel Only |
| Floating (foam core) 1 | | | | |
| Twisted Polypropylene 2 <u>X</u> | | | | |
| Other 9 | | | | |
| | MM DETERRENT DEVICES USD? | | | |
| | ACTIVE | 0 | <u>X</u> 1 | Number |
| LEADLINE WEIGHT | | | | Frequency |
| <u>32</u> . <u>5</u> lbs/ net | | | | |
| | PASSIVE | 0 | <u>X</u> 1 | Number |
| COMMENTS | | | | |

| # OF NETS | MESH SIZE | in |
|-----------|-----------|----|
| 15 | 12 . 00 | |
| | | |
| | | |
| | | |
| | | |
| | | |

(CIRCLE ONE)

A / (E)

A / E

A / E

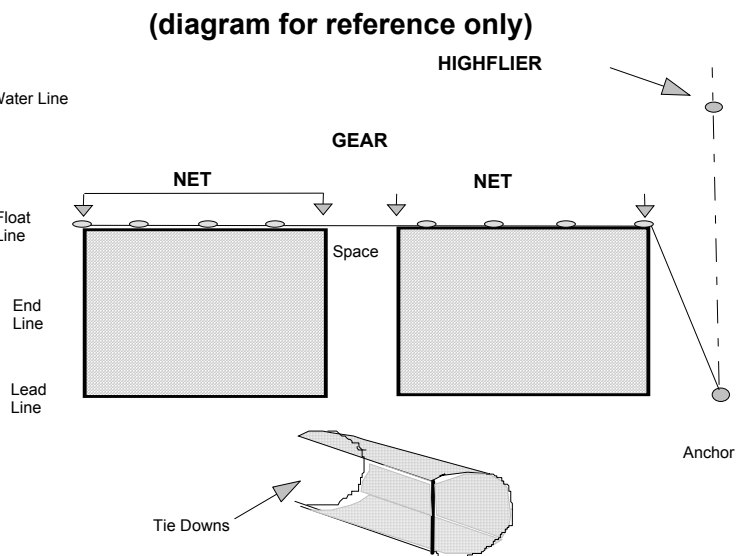
A / E

A / E

A / E

OR

MESH SIZE RANGE



NMFS FISHERIES OBSERVER PROGRAM
GILLNET GEAR LOG

| | |
|-------------------|---|
| OBS/ TRIP ID | |
| DATE LAND (mm/yy) | / |

| GEAR CODE | GEAR NUMBER(S) | | NUMBER OF NETS | |
|---------------------------|---------------------------|--|-----------------------|--|
| AVERAGE NET: | USED? | NO YES | MEASUREMENTS | |
| LENGTH _____ ft | FLOATS | 0__ 1__ | Dist Between _____ ft | |
| HEIGHT _____ ft | TIE DOWNS | 0__ 1__ (all nets) 2__ (not all nets) | Length _____ ft | |
| MESH COUNT | SPACE(S) | | | |
| VERTICAL _____ | BETWEEN | 0__ 1__ | Number _____ | |
| | NETS | | Width _____ ft | |
| HANGING | | | Length _____ ft | |
| RATIO _____ / _____ | DROPLINES | 0__ 1__ | Weight _____ lbs | |
| TWINE (CIRCLE ONE) | ADDITIONAL WTS | 0__ 1__ | Weight _____ lbs | |
| SIZE _____ A / E | ANCHOR(S) | 0__ 1__ | Number _____ | |
| # STRANDS _____ | | | Weight _____ lbs | |
| NET MATERIAL | | | (total) | |
| Unknown 0__ | | | Actual 1__ | |
| Nylon 1__ | | | Estimated 2__ | |
| Other 9__ | | | | |
| FLOATLINE MATERIAL | SECURING METHOD(S) | 1__ None 2__ Ocean Bottom 3__ Vessel / Ocean Bottom 4__ Vessel Only | | |
| Unknown 0__ | | | | |
| Floating (foam core) 1__ | | | | |
| Twisted Polypropylene 2__ | | | | |
| Other 9__ | | | | |
| LEADLINE WEIGHT | MM DETERRENT DEVICES USD? | | | |
| _____ lbs/ net | ACTIVE | 0__ 1__ | Number _____ | |
| | Brand _____ | | Frequency _____ kHz | |
| | PASSIVE | 0__ 1__ | Number _____ | |
| COMMENTS | | | | |

| # OF NETS | MESH SIZE in | (CIRCLE ONE) | COLOR |
|-----------|--------------|--------------|------------------|
| | | A / E | Unknown 00__ |
| | | A / E | Clear 01__ |
| | | A / E | White 02__ |
| | | A / E | Pink 03__ |
| | | A / E | Black 04__ |
| | | A / E | Green 05__ |
| | | A / E | Blue 06__ |
| | | A / E | Multi-color 07__ |
| | | A / E | Red 08__ |
| | | A / E | Orange 09__ |
| | | A / E | Purple 10__ |
| | | A / E | Combination 98__ |
| | | A / E | Other 99__ |

OR

MESH SIZE RANGE

_____ - _____

(diagram for reference only)

The diagram illustrates the components of a gillnet gear. It shows two rectangular nets connected by a central 'Space'. Above the nets are floats, and a 'Water Line' is indicated. A 'HIGHFLIER' is shown as a line extending from the end of the gear. The 'End Line' and 'Lead Line' are also labeled. A 'Tie Downs' detail shows a close-up of the net's edge. An 'Anchor' is shown at the end of the gear.

GILLNET HAUL LOG

This log contains detailed questions about the setting and hauling of gear, and the haul's catch. Complete a new log after each hauling of gear. If you feel that you cannot go on deck for weather related safety reasons, record as much information on this log as possible (*i.e.* Header Information, weather, depths, times, positions, *etc.*).

The Species Information section of this log should be used to record catches of groundfish species, debris and shells according to the sampling protocol being followed on that particular trip.

Complete Fish Sampling Trips: The observer will record complete catch data, *i.e.* both kept and discarded information, for all hauls on "complete fish sampling" gillnet trips. All hauls on these trips will be recorded as observed, and all kept and discarded catch recorded. In addition, biological sampling of the entire catch will occur after **every haul**, with an emphasis placed on sampling discarded species.

Limited Fish Sampling Trips: The observer will record only the kept catch for all hauls on "limited fish sampling" gillnet trips. All hauls on these trips will be recorded as unobserved as the observer will conduct marine mammal, sea turtle, and debris haul watches. In addition, biological sampling of the kept catch will occur after the **last haul only**.

For more information, refer to the Fishery Sampling Priority Section of the NEFSC Observer Program Biosampling Manual.

If any pelagic species (*i.e.* swordfish, billfish, large tuna species, sharks, *etc.*), sturgeons, rays or tagged fish are caught by the gear, an Individual Animal Log must be completed to provide information on each animal. This is true for both limited AND complete fish sampling trips. This Gillnet Haul Log will serve as a cover sheet for any Individual Animal Log(s) corresponding to this haul that may follow. All marine mammals, sea turtles and sea birds caught by the gear must be recorded on a Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

If there are insufficient lines on one form for all species caught in this haul, continue listing species on an additional Gillnet Haul Log, making sure to com-

plete all of the Header Information (A-C) and HAUL NUMBER (E).

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that a field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Set Begin: First component of gillnet deployed.

Set End: Gillnet secured to anchoring device or completely deployed.

Haul Begin: Hauling equipment put into gear or retrieval of gear commences.

Haul End: Gillnet completely retrieved and aboard vessel.

INSTRUCTIONS

For instructions on completing fields **A-W**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the gear number used for this haul as uniquely identified on the appropriate Gillnet Gear Characteristics Log.

2. MARINE MAMMAL HAUL WATCH?: Record whether a marine mammal, sea turtle, and debris haul watch is conducted during this haul by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

NOTE: These watches will be conducted during **every** haul of a "limited fish sampling" trip.

3. DEPTH, LEADLINE: Record, in whole fathoms, the depth from the surface, at which the leadline fishes for this haul. This range may be calculated by

adding the gear dropline length(s) to the net height.

NOTE: If the gear fishes on the bottom, sink gillnets for example, the value recorded in this fields should equal WATER DEPTH (M).

SET/HAUL INFORMATION

Set Information for the next 3 fields (#'s 4, 5 and 6):

If the set is witnessed, record Set BEGIN/END DATES and BEGIN/END TIMES but **not** SOAK DURATION. If the set is not witnessed, fill in SOAK DURATION **only**.

4. BEGIN/END DATE: Record the month, day, and year, based on local time, that this set began and ended. If the setting of the gear is not witnessed do not complete this field, instead, complete SOAK DURATION (#6). Record the month, day, and year, based on local time, that this haul began and ended.

5. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000-2359), that this set began and ended, *i.e.* when the first component of the gillnet is deployed (Set Begin) and when the string is secured to an anchoring device, or completely deployed (Set End). If the setting of the gear is not witnessed do not complete this field, instead, complete SOAK DURATION (#6) and record the estimated set times in COMMENTS. Record the local time, using the 24 hour clock (0000-2359), that this haul began and ended, *i.e.* when the hauling equipment is put into gear or retrieval of gear commences (Haul Begin), and when the gillnet is completely retrieved and aboard the vessel (Haul End).

NOTE: Record the set times of the majority of the nets in the string.

6. SOAK DURATION: Record, to the nearest tenth of an hour, the amount of time that the gear for this haul is in the water fishing. This is the amount of time from when the string is secured to an anchoring device, or completely deployed (Set End), until when the hauling equipment is put into gear or retrieval of gear commences (Haul Begin). Obtain this time from the captain. If the setting of the gear is witnessed do not complete this field, instead, complete SET BEGIN DATES and TIMES (#'s 4 and 5).

NOTE: Record estimated set times used to calculate SOAK DURATION in

COMMENTS.

7. END WATER TEMPERATURE: Record, to the nearest tenth of a degree Fahrenheit, the surface sea water temperature when this haul **ended**.

NOTE: If this temperatures is obtained in Celsius, use Appendix Q. Conversion Tables to convert it to Fahrenheit.

NOTE: Use a "ScoopMaster" thermometer to obtain this temperature.

NOTE: Especially if an incidental take occurs in this haul, a HAUL END WATER TEMPERATURE **must** be recorded.

8. GEAR CONDITION: Indicate the condition of the gear at haulback, even if this was the condition of the gear when set, by recording the most appropriate two digit code listed below, and in Appendix J. Gear Condition Codes:

- 00 = Unknown.
- 21 = No gear damage, or very few small, scattered holes.
- 22 = Small number of torn meshes, not exceeding 25% of any one net, each net may be torn slightly.
- 23 = Less than 50% of the nets have less than 50% of the meshes torn.
- 24 = 50% or more of the nets have less than 50% of the meshes torn.
- 25 = Less than 50% of the nets are obstructed by a large object.
- 26 = 50% or more of the nets are obstructed by a large object.
- 27 = Less than 50% of the nets have 50% or more of the meshes torn.
- 28 = 50% or more of the nets have 50% or more of the meshes torn.
- 29 = Nets in the string totally balled up.
- 99 = Other, specify in COMMENTS.

NUMBER OF NETS

9. SET: Record the **total** number of nets that are used for this set. This number should agree with the number recorded in NUMBER OF NETS on the corresponding Gillnet Gear Characteristics Log(s).

10. HAULED: Record the **total** number of nets that are hauled back from this set. If a net is partially hauled,

round this number to the nearest whole net.

Example: If 200 feet of a 300 feet net is hauled record one net hauled.

NOTE: Record a zero "0" if less than half of one net of a string is hauled.

11. LOST: Record the **total** number of nets that are lost from this set. If this number differs from NUMBER OF NETS SET minus NUMBER OF NETS HAULED record the reason(s) in COMMENTS.

NUMBER OF MARINE MAMMAL DETERRENT DEVICES

ACTIVE:

An "active" marine mammal deterrent device is a device which emits sound which may be detected by a marine mammal.

12. HAULED: Record the number of active marine mammal deterrent devices (*i.e.* pingers) on the gear as it is hauled. This number should agree with the number recorded in NUMBER OF ACTIVE MARINE MAMMAL DETERRENT DEVICES USED on the corresponding Gillnet Gear Characteristics Log(s).

NOTE: If gear is partially hauled, record the number of marine mammal deterrent devices **only on** the portion of gear hauled.

NOTE: These numbers should reflect the number of these devices on the gear regardless of whether or not it is believed these devices are actually working. Information of this nature should be recorded in the COMMENTS.

13. LOST: Record the number of active marine mammal deterrent devices (*i.e.* pingers) lost from this set. If this number differs from NUMBER OF ACTIVE MARINE MAMMAL DETERRENT DEVICES USED minus NUMBER OF ACTIVE MARINE MAMMAL DETERRENT DEVICES HAULED, then record the reason(s) in COMMENTS.

NOTE: Do not include devices not seen because gear was partially hauled.

PASSIVE:

A "passive" marine mammal deterrent device is a device which may provide reflection of marine mammal

echolocation signals.

14. HAULED: Record the number of passive marine mammal deterrent devices on the gear as it is hauled. This number should agree with the number recorded in NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES USED on the corresponding Gillnet Gear Characteristics Log(s).

Example: Net material that is designed to be more acoustically visible to marine mammals.

NOTE: If some or all of the nets in the gear are made from material that is designed to be more acoustically visible to marine mammals, record the **number of nets** within the gear made from this material.

NOTE: If gear is partially hauled, record the number of marine mammal deterrent devices **only on** the portion of gear hauled.

15. LOST: Record the number of passive marine mammal deterrent devices lost from this set. If this number differs from NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES USED minus NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES HAULED, then record the reason(s) in COMMENTS.

NOTE: Do not include devices not seen because gear was partially hauled.

16. SET METHOD: Record the method that best describes the manner in which the gear for this haul was set by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Temperature.
- 02 = Bottom Contours (*i.e.* depth).
- 03 = Compass/ Loran.
- 04 = Tide/ Current.
- 05 = Visual (*i.e.* echosounder, surface feeding).
- 98 = Mixed, (more than one code applies) record all set methods on line 16A.
- 99 = Other, record the set method(s) on line 16A.

COMMENTS

Record any additional information regarding this haul, *i.e.* unusual species caught, levels of bycatch, *etc.*

If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM
GILLNET HAUL LOG

| | |
|-------------------|------|
| OBS/ TRIP ID | A |
| DATE LAND (mm/yy) | B / |
| PAGE # | C OF |

| | | | | | | | | | | | | | | | | | | | |
|-----------|-------------|------------------------------------|--------------------------------------|--------------------------------------|--|--------------------------------------|--------------------|---------------------------------------|----------------|-------------|--|----------------|------|--------|--|------|--|---------|--|
| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS? NO 0 ____ YES 1 ____ | MM WATCH? NO 0 ____ YES 1 ____ | CATCH? NO 0 ____ YES 1 ____ | INC TAKE? NO 0 ____ YES 1 ____ | WEATHER CODE | WIND SPEED DIRECTION | | WAVE HEIGHT | DEPTH, HAUL BEGIN BOTTOM LEADLINE | | | | | | | | |
| D | 1 | E | F | 2 | G | H | I | J | kn K | L | ft | M | fm 3 | | | | | | |
| SET INFO | | DATE AND TIME mm/dd/yy 24 hours | | O EST R SOAK DUR | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TARGET SPECIES | | CODE(S) | GEAR COND CODE | | | | | | | |
| S | BEGIN | / 4 / | | 5 : | Station 1 | | Latitude / Bearing | | Station 2 | | Longitude / Bearing | | | | | | | | |
| E | END | / / | | : | 6 | | N | | | | | | | | | | | | |
| HAUL INFO | | DATE | | TIME | WATER TEMP | | | | NUMBER OF NETS | | IF MM DETERRENTS USED: ACTIVE PASSIVE | | | | | | | | |
| H | BEGIN | / / | | : | | | | | SET 9 | | HAULED 12 14 | | | | | | | | |
| A | END | / / | | : | | | | | HAULED 10 | | LOST 13 15 | | | | | | | | |
| U | END | / / | | : | 7 . ° F | | | | LOST 11 | | | | | | | | | | |
| COMMENTS | | | | | | | | SET METHOD | | | | | | | | | | | |
| | | | | | | | | 16 | | | | | | | | | | | |
| | | | | | | | | Unknown 00 ____ Visual 05 ____ | | | | | | | | | | | |
| | | | | | | | | Temperature 01 ____ Mixed 98 ____ | | | | | | | | | | | |
| | | | | | | | | Bottom Contours 02 ____ Other 99 ____ | | | | | | | | | | | |
| | | | | | | | | Compass/ Loran 03 ____ 16A | | | | | | | | | | | |
| | | | | | | | | Tide/ Current 04 ____ | | | | | | | | | | | |
| SPECIES | | CATCH DISP | | POUNDS | | DISP | | WEIGHT | | SPECIES | | CATCH DISP | | POUNDS | | DISP | | WEIGHT | |
| NAME | | CODE | | K / D | | CODE | | D/R A/E | | NAME | | CODE | | K / D | | CODE | | D/R A/E | |
| Q | | R | | S | | T | | U | | V | | W | | | | | | | |
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NMFS FISHERIES OBSERVER PROGRAM
GILLNET HAUL LOG

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|-------------------|---------|
| OBS/ TRIP ID | S02089C |
| DATE LAND (mm/yy) | 10 / 01 |
| PAGE # | 1 OF 2 |

| | | | | | | | | | | | | | | | |
|--|-------------|------------------------------------|---|---|--|---|---------------------|--|----------------|-------------|--------------------------------------|---------|-----|----|----|
| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS? NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | MM WATCH? NO 0 <input checked="" type="checkbox"/> YES 1 <input type="checkbox"/> | CATCH? NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | INC TAKE? NO 0 <input checked="" type="checkbox"/> YES 1 <input type="checkbox"/> | WEATHER CODE | WIND SPEED DIRECTION | | WAVE HEIGHT | DEPTH, HAUL BEGIN BOTTOM LEADLINE | | | | |
| 100 | 2 | 2 | | | | | 03 | 20 | kn 45 | 5 | ft | 90 | fm | 90 | fm |
| SET INFO | | DATE AND TIME mm/dd/yy 24 hours | O EST R SOAK DUR | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TARGET SPECIES | | CODE(S) | GEAR COND CODE | | | | |
| S | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | Monkfish | | | 21 | | | | |
| E | | | | | | | | | | | | | | | |
| T | END | / / | : | 72 . 0 hrs | | | | | | | | | | | |
| HAUL INFO | | DATE | TIME | WATER TEMP | | | | | NUMBER OF NETS | | IF MM DETERRENTS USED: | | | | |
| H | BEGIN | | | | | | | | SET | 15 | ACTIVE | PASSIVE | | | |
| A | | 10 / 07 / 01 | 07 : 54 | | 40 48.3 | | 71 26.8 | HAULED | 15 | HAULED | | | | | |
| U | | | | | | | | LOST | | LOST | | | | | |
| L | END | 10 / 07 / 01 | 09 : 05 | 54 . 0 F | 40 49.4 | | 71 27.5 | LOST | 0 | | | | | | |
| COMMENTS | | | | | | | | SET METHOD | | | | | | | |
| Captain said net was set three days ago. | | | | | | | | Unknown 00 <input type="checkbox"/> Visual 05 <input type="checkbox"/> | | | | | | | |
| Captain tailing smaller monks. | | | | | | | | Temperature 01 <input type="checkbox"/> Mixed 98 <input type="checkbox"/> | | | | | | | |
| | | | | | | | | Bottom Contours 02 <input checked="" type="checkbox"/> Other 99 <input type="checkbox"/> | | | | | | | |
| | | | | | | | | Compass/ Loran 03 <input type="checkbox"/> | | | | | | | |
| | | | | | | | | Tide/ Current 04 <input type="checkbox"/> | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E | | |
| Monkfish (tail) | | K | 59 | 100 | D | A | Cod | | K | 17.5 | 100 | D | A | | |
| Monkfish (liver) | | K | 12 | 100 | D | A | Sand Dab Fldr. | | D | 16 | 001 | R | A | | |
| Monkfish | | K | 350 | 100 | R | E | | | | | | | | | |
| Monkfish | | D | 24 | 012 | R | A | | | | | | | | | |
| Winter Skate (wings) | | K | 35 | 100 | D | E | | | | | | | | | |
| Little Skate | | D | 100 | 001 | R | E | | | | | | | | | |
| Jonah Crab | | D | 50 | 001 | R | E | | | | | | | | | |
| American Lobster | | K | 7 | 100 | R | A | | | | | | | | | |

NMFS FISHERIES OBSERVER PROGRAM
GILLNET HAUL LOG

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| OBS/ TRIP ID | |
| DATE LAND (mm/yy) | / |
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|-----------|-------------|---|--------------------------------------|--|-----------------------------------|--------------------------------------|--------------|--|----------------|---------------------|---|--------|-----|
| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS? NO 0 ____ YES 1 ____ | MM WATCH? NO 0 ____ YES 1 ____ | CATCH? NO 0 ____ YES 1 ____ | INC TAKE? NO 0 ____ YES 1 ____ | WEATHER CODE | WIND SPEED DIRECTION kn o | | WAVE HEIGHT ft | DEPTH, HAUL BEGIN BOTTOM LEADLINE fm fm | | |
| SET INFO | | DATE AND TIME mm/dd/yy 24 hours | O EST R SOAK DUR | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TARGET SPECIES | | CODE(S) | GEAR COND CODE | | |
| S | BEGIN | / / | : | 9960 - | | 9960 - | | | | | | | |
| E | END | / / | : | 9960 - | | 9960 - | | | | | | | |
| HAUL INFO | | DATE | TIME | WATER TEMP | | | | | NUMBER OF NETS | | IF MM DETERRENTS USED: | | |
| H | BEGIN | / / | : | 9960 - | | 9960 - | | SET | | ACTIVE PASSIVE | | | |
| A | END | / / | : | 9960 - | | 9960 - | | HAULED | | HAULED | | | |
| U | END | / / | : | 9960 - | | 9960 - | | LOST | | LOST | | | |
| L | | / / | : | 9960 - | | 9960 - | | | | | | | |
| COMMENTS | | | | | | | | SET METHOD | | | | | |
| | | | | | | | | Unknown 00 ____ Visual 05 ____ | | | | | |
| | | | | | | | | Temperature 01 ____ Mixed 98 ____ | | | | | |
| | | | | | | | | Bottom Contours 02 ____ Other 99 ____ | | | | | |
| | | | | | | | | Compass/ Loran 03 ____ | | | | | |
| | | | | | | | | Tide/ Current 04 ____ | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
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ALTERNATIVE PLATFORM SAMPLING TRIPS

The Alternative Platform Program utilizes an independent vessel to observe small commercial fishing vessels in coastal gillnet fisheries that cannot accommodate an observer, to augment conventional observer coverage, or when observers are unavailable. When observing fishing activities from the alternative platform, there are differences in how the data may be collected. The following protocols will apply to all Alternative Platform observations.

- All fields refer to the commercial vessel that you are watching, *i.e.* PORT LANDED, dates, times, EQUIPMENT USED, etc. If these fields are not available, document estimated values in the COMMENTS section whenever possible.
- Gillnet Gear Log: Record gear characteristics **only for gear retrievals that are witnessed**. Do not record gear characteristics for gears that may have been hauled prior to the arrival of the alternative platform vessel. Individual gear characteristics for all gears used may not be available; fill this log out as completely as possible including any combined information in the COMMENTS section.
- Gillnet Haul Log: **If a haul is already in progress** when the alternative platform vessel arrives at the fishing vessel, **do not record any information for this haul**. Wait until the next haul commences to begin collecting data and record this information in COMMENTS; *i.e.* F/V hauled two strings prior to the arrival of the alternative platform vessel, kept about 100 lbs of spanish mackerel.
- **Conduct a Marine Mammal Watch for all hauls.** During some trips, it is also possible to **obtain complete catch information**, for both kept and discarded species. If the observer determines that this is possible, indicate HAUL OBSERVED? by placing an “X” next to “Yes” (1), and record the complete kept and discard information in the species section of the haul log.
- Vessel & Trip Log: In the NUMBER OF TRIP HAULS and NUMBER OF UNOBSERVED HAULS fields, record **only the number of hauls that you witness from HAUL BEGIN to HAUL END**. Do not include hauls that the fishing vessel completed prior to the arrival of the alternative platform vessel or partially witnessed hauls. For OBSCON reporting, in the PRIMARY and SECONDARY SPECIES WEIGHTS fields, **include total weights only for hauls that were witnessed from HAUL BEGIN to HAUL END**. If possible, obtain the total pounds landed by the fishing vessel at the dock and record them in COMMENTS.

TRAWL GEAR CHARACTERISTICS LOG

This log contains detailed questions about the gear fished. Complete a new log for each uniquely configured gear (as defined below) **hailed** during a trip. These unique configurations may be based on changes made to the length of the headrope, mesh size in the codend, *etc.* Any changes in these fields require the completion of another Trawl Gear Characteristics Log. Do not use the COMMENTS section to explain these differences among gears. Number each gear configuration sequentially.

If the gear is set out and hauled more than once during a trip, do not complete a new Trawl Gear Characteristics Log for the multiple hauls. Rather, record on the Trawl Haul Log which gear numbers are being hauled. In addition, record any other information necessary to understand the manner in which the gear was set/hailed in COMMENTS.

If the vessel has two or more identical gears that are hauled during the trip, complete only one Trawl Gear Characteristics Log, and record the consecutively assigned numbers of all identical gears described in GEAR NUMBER(S) (#1). See the trawl definitions below and GEAR NUMBER(S) (#1) for more information on defining and numbering gears.

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Otter Trawl: A device constructed of twine webbing so that when fully assembled and rigged, it will take the shape of a huge funnel while being towed. To spread the mouth so that it will cover the largest possible area, each wing is fastened to a trawl "door". Each door is fitted with chains to be attached to a towing cable from the trawling vessel. The resistance of the water to the forward

motion of the doors, as they are towed at different angles, forces them to pull in opposite directions and thus keep the mouth of the net open.

Square: The section of netting fitted between the top body and the two top wings so that it partially overhangs the FOOTROPE.

Top Wings: Two sections of netting usually shaped diagonally opposite to one another to form the upper mouth of the trawl. The HEADROPE is attached from one top wing end to the other, along the diagonal flymesh edges and across the bosom or center part of the square.

Lower Wings: Two narrow sections of netting fitted between the lower belly and the top wings to form the lower lip of the trawl net. The FOOTROPE is attached from one wing end to the other, along the flymesh edges and across the lower belly bosom meshes. The lower wings are subject to the most abrasion, and consequently they are the sections which have to be continually repaired or replaced when working rough ground.

Codend: Two rectangular pieces of netting made with heavy twine. The top edges are joined to the narrow end of the bellies, the selvages are laced together and a codline or codend clip is woven through the lower meshes for securing the section into a bag where the fish are held until released onboard the trawler.

The codend is the section of a trawl net most often affected by mesh size regulations. The size of the codend depends on the species being targeted and regulations.

Codend Liner: A section of small mesh net sewn into the inside of the codend bag. The purpose of which is to restrict the escapement of smaller species, *i.e.* squid.

Codend Strengtheners: Any material attached to the outside of the codend bag to prevent a full codend from bursting when it is being lifted aboard. This material may be in the form of strengthening ropes, which are attached lengthwise and/or circumferentially to restrict stretching of the codend, or a strengthening/lifting bag, which is a cylinder of netting surrounding the codend. A strengthening bag may also be considered chaffing gear.

Fishing Circle: The section of the net located behind the wings and before the belly. It is the area which creates the largest opening in the net.

Headrope: The line, generally of fiber rope or steel wire rope, which fits along the top wings and center part of the square to form the upper lip of the otter trawl.

Fish Outlet: Used in conjunction with an excluder device in order to provide an opening in the net to facilitate escape of fish, sea turtles, *etc.*

Gear: A trawl, commonly referred to as “the net”. This includes ground cables, headrope, footrope, floats, weights, netting and any attached equipment.

INSTRUCTIONS

For instructions on completing the Header Fields **A, B and D** refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER(S): Record the number(s) assigned to each uniquely configured gear hauled and for which characteristics are described. See the definition of gear in the introduction.

NOTE: If two or more identical gears are used, assign consecutive numbers to each gear and record all of these numbers on one Trawl Gear Characteristics Log. Only one Trawl Gear Characteristics Log is needed to record the characteristics and assigned numbers for all identical gears used.

Example: The first gear is “1”, and its characteristics will be recorded on one Trawl Gear Characteristics Log. Two other nets are used during the trip. These differ from #1, but are identical to each other. They are “2” and “3”, and their characteristics are recorded on a second Trawl Gear Characteristics Log.

DOORS

2. USED?: Record whether doors are used with this gear by placing an “X” next to the appropriate code (see Figure 1):

0 = No.

1 = Yes.

3. WEIGHT: Record, in whole kilograms, the weight of **one** door used with this gear. This information may be obtained from the captain.

CONSTRUCTION MATERIAL

4. TYPE: Record the type of construction material used in the body of the net (excluding the codend) and the codend by placing an “X” next to the appropriate code:

00 = Unknown.

01 = Nylon.

02 = Poly.

03 = Kevlar®.

04 = Spectra®.

05 = Tenex®.

06 = Nomex®.

98 = Combination, record all construction material types on line 4A.

99 = Other, record the construction material type on line 4A.

LENGTH MEASUREMENTS

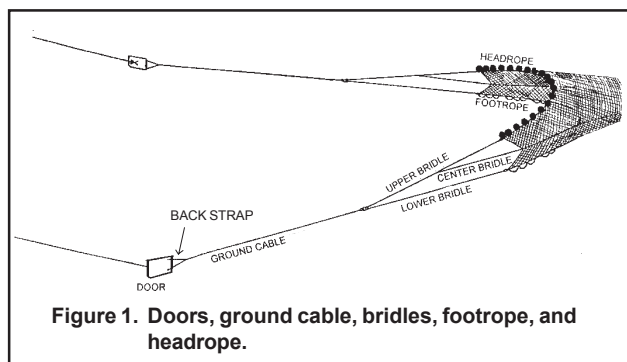
5. HEADROPE: Record, in whole feet, the length of the rope along the top of the net. This information may be obtained from the captain. See Figure 1.

6. FOOTROPE/SWEEP: Record, in whole feet, the length of the rope along the bottom of the net. This information may be obtained from the captain. See Figure 1.

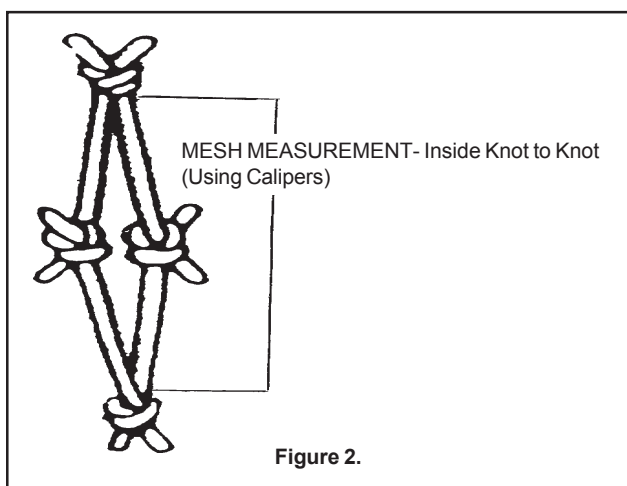
7. GROUND CABLE: Record, in whole feet, the length of the wire connecting the bridles and the back strap. This information may be obtained from the captain. See Figure 1.

FISHING CIRCLE

8. NUMBER OF MESHES: Record the number of meshes in the fishing circle. This information may be obtained from the captain. See Figure 6 for the location of the fishing circle.



9. MESH SIZE: Record, to the nearest tenth of an inch, a randomly selected **inside** mesh measurement from the fishing circle. This information may be obtained from the captain. See Figure 2.



GROUND GEAR

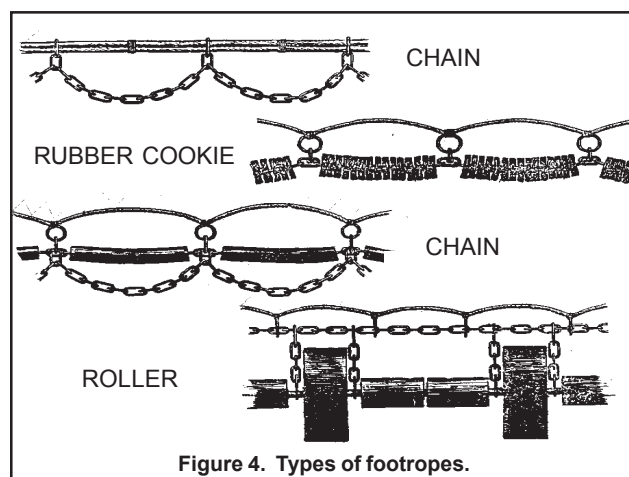
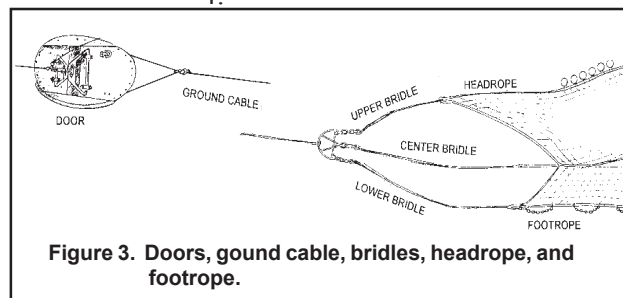
10. TYPE: Record the type of gear making up the ground cable, the bridles/legs, and the footrope by placing an "X" next to the appropriate code (see Figures 1, 3 and 4):

- 0 = Unknown.
- 1 = Chain.
- 2 = Cable/Wire.
- 3 = Wrapped Cable.
- 4 = Rock Hopper.
- 5 = Roller.
- 6 = Rubber Cookie.
- 7 = Bobbin (Half Round).
- 8 = None.
- 9 = Other, record the ground gear type on line 10A.

NOTE: If more than one type of gear is

used on a ground gear piece, record the type of the **LARGEST** piece of gear used. This is not always the longest piece.

Example: If the footrope has 80 feet of 1 inch wire, 25 feet of 3 inch rubber cookies and 15 feet of 5 inch rollers, record "Roller" (5) for FOOTROPE GROUND GEAR TYPE. See Figure 4.



FLOATS

11. NUMBER: Record the total number of floats attached to the headrope.

12. SIZE: Record the diameter, in whole inches, of the majority of floats attached to the headrope.

CODEND

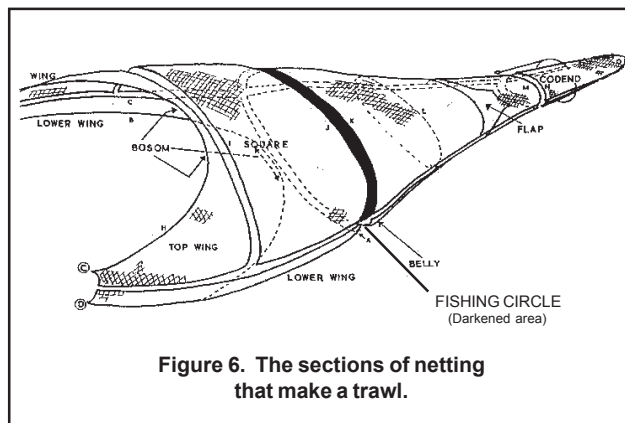
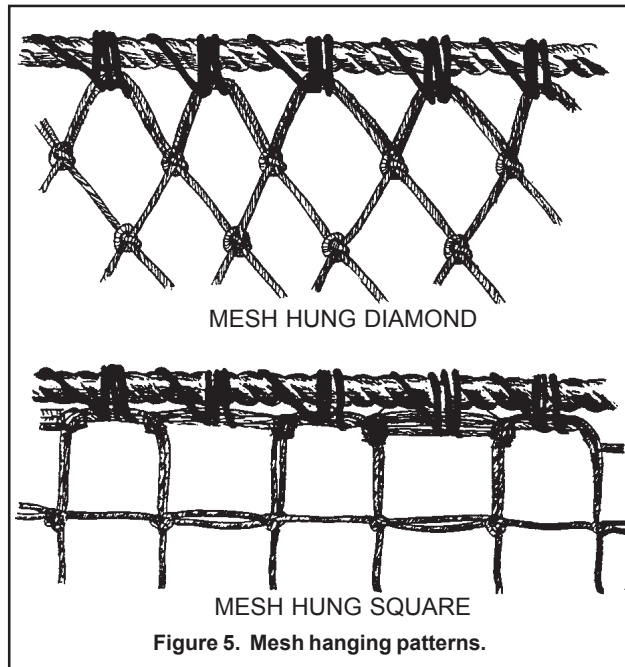
13. HUNG: Record the hanging configuration of the codend by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Diamond (see Figure 5).

- 2 = Square (see Figure 5).
 3 = Square, Wrapped.
 8 = Combination, record the hanging configuration in COMMENTS.

NOTE: If the codend is wrapped, this is considered chaffing gear. Be sure to record "Yes" (1) for CHAFFING GEAR USED (#19).

NOTE: See Figure 6 for the location of the



codend.

14. TWINE TYPE: Record whether the twine used in the codend is single or double stranded by placing an "X" next to the appropriate code:

- 1 = Single.
 2 = Double.

15. MESH SIZE: Record, in whole millimeters, ten randomly selected **inside** mesh measurements from the codend. These measurements should be taken inside from knot to knot, in the direction in which the mesh is hung. Use calipers for these measurements. See Figure 2 and Appendix P. Vernier Caliper Instructions for further information.

NOTE: These measurements are **not** bar lengths.

16. LINER USED?: Record whether a liner is used inside the net's codend by placing an "X" next to the appropriate code:

- 0 = No.
 1 = Yes.

NOTE: See the gear definitions in the introduction.

17. MESH SIZE: Record, in whole millimeters, a randomly selected **inside** mesh measurement from the liner in the codend. Use calipers for this measurement. See Figure 2 and Appendix P. Vernier Caliper Instructions for further information.

18. STRENGTHENER USED?: Record whether strengthener material is used in the codend of this net by placing an "X" next to the appropriate code:

- 0 = No.
 1 = Yes.

NOTE: See the gear definitions in the introduction.

19. CHAFFING GEAR USED?: Record whether chaffing gear is used on the codend by placing an "X" next to the appropriate code:

- 0 = No.
 1 = Yes.

NOTE: A codend in which the meshes are "wrapped" is considered to have chaffing gear.

A codend with a strengthening bag is also considered to have chaffing gear.

GEAR MOUNTED ELECTRONICS

20. USED?: Record whether any transducers are used on this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

21. NUMBER OF TRANSDUCERS: Record the number of transducers used on this gear.

22. TYPE: Record the type of transducer used on this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Wired.
- 2 = Wireless.

23. BRAND: Record the brand of transducers used on this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Furuno®.
- 2 = Simrad®.
- 9 = Other, record the transducer brand on line 23A.

24. LOCATION: Record the location of transducers used on this gear by placing an "X" next to the appropriate code (see Figures 1 and 6):

- 0 = Unknown.
- 1 = Headrope.
- 2 = Wings.
- 3 = Footrope.
- 4 = Headrope and Footrope.
- 8 = Other Combination, record all transducer locations on line 24A.
- 9 = Other, record the transducer location on line 24A.

25. NUMBER OF RECEIVERS: Record the **total** number of receivers used on this vessel for the transducer(s).

EXCLUDER/SEPARATOR DEVICE

26. USED?: Record whether an excluder or separator device is used on this gear by placing an "X" next to the appropriate code (see Figure 7):

- 0 = No.
- 1 = Yes.

27. TYPE: Record the type of excluder or separator device used on this gear by placing an "X" next to the

appropriate code:

- 0 = Unknown.
- 1 = Nordmore Grate (see Figure 7).
- 2 = T.E.D. (see Figure 8).
- 3 = Separator Panel.
- 4 = Guiding Device, *i.e.*, a funnel or "flap" (see Figure 7).
- 5 = Raised Footrope.
- 8 = Combination, record all excluder/separator device types on line 27A.
- 9 = Other, record the excluder/separator device type on line 27A.

NOTE: For Nordmore grates, record whether the outlet is on the top or bottom in COMMENTS.

FISH OUTLET

28. USED?: Record whether a fish outlet is used on this gear by placing an "X" next to the appropriate code (see Figure 7):

- 0 = No.
- 1 = Yes.

29. LENGTH: Record, in whole inches, the length of the fish outlet from the front to the back of the net.

NOTE: If the outlet shape is triangular, record the length of the side of the triangle, which runs from the front to the back of the net.

30. WIDTH: Record, in whole inches, the width of the fish outlet from side to side of the net.

NOTE: If the outlet shape is triangular, record the length of the side of the triangle which runs from side-to-side in the net.

31. SHAPE: Record the shape of the fish outlet by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Rectangular.
- 06 = Square.
- 07 = Diamond.
- 08 = Triangular.
- 99 = Other, record the fish outlet shape on line 31A.

32. LOCATION: Record the location of the fish outlet used on this gear by placing an "X" next to the ap-

appropriate code:

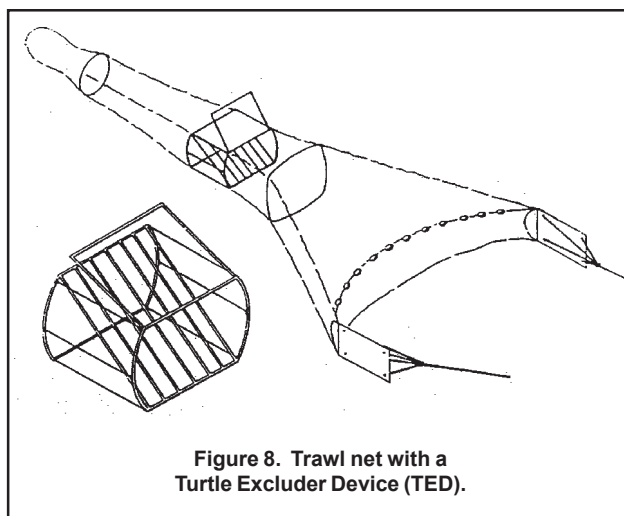
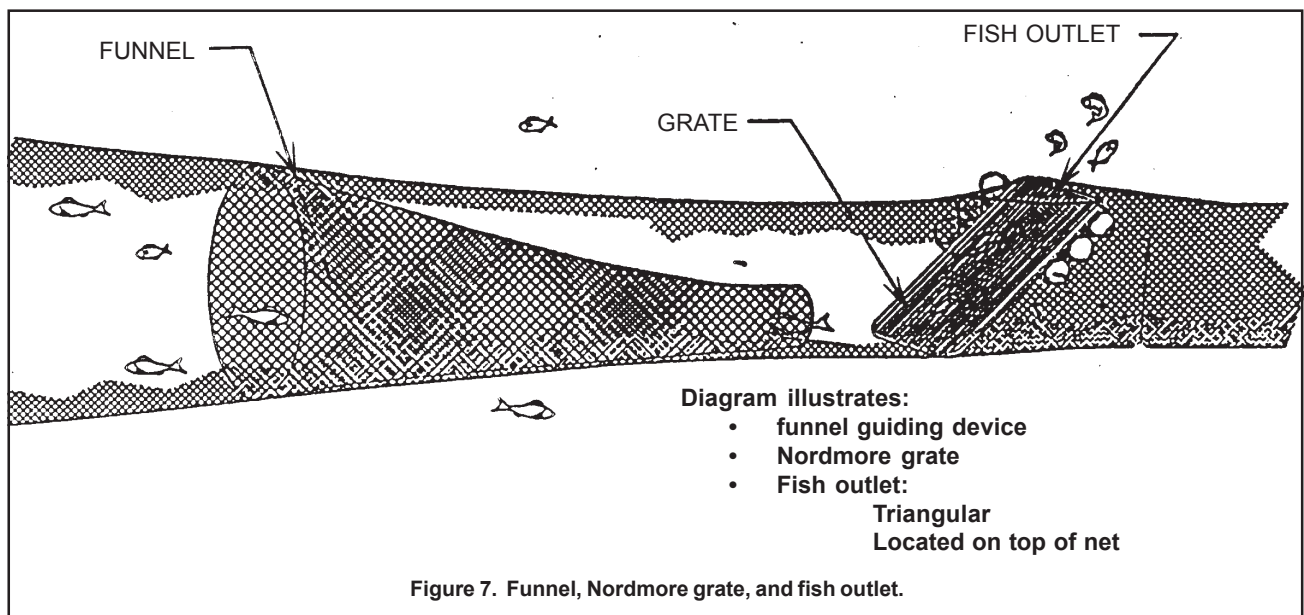
- 0 = Unknown.
- 1 = Top.
- 2 = Bottom.
- 3 = Side.
- 8 = Combination, record all fish outlet locations on line 32A.
- 9 = Other, record the fish outlet location on line 32A.

more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

If net name and/or manufacturer is known, record this information in COMMENTS.

COMMENTS

Record any additional information about this gear, *i.e.*, unusual arrangements of the gear, whether the Nordmore Grate outlet is on the top or bottom, *etc.* If



**NMFS FISHERIES OBSERVER PROGRAM
TRAWL GEAR CHARACTERISTICS LOG**

| | | | | OBS/TRIP ID | | A | |
|---|------------------------------|-----------------|---------------|----------------------------------|-------------------------|-------------------------------------|--|
| | | | | DATE LANDED mm/yy | | B / | |
| GEAR NUMBER(S) 1 | CONSTRUCTION MATERIAL | | | LENGTH MEASUREMENTS | | CODEND | |
| | TYPE 4 | NET BODY | CODEND | Headrope 5 _____ ft | HUNG 13 | | |
| | Unknown 00 _____ | | | | Unknown 0 _____ | | |
| GEAR CODE D | Nylon 01 _____ | | | Footrope/Sweep 6 _____ ft | Diamond 1 _____ | | |
| | Poly 02 _____ | | | | Square 2 _____ | | |
| | Kevlar® 03 _____ | | | Ground Cable 7 _____ ft | Square, Wrapped 3 _____ | | |
| | Spectra® 04 _____ | | | | Combination 8 _____ | | |
| DOORS USED? 2 | Tenex® 05 _____ | | | FISHING CIRCLE | | | |
| NO 0 _____ YES 1 _____ | Nomex® 06 _____ | | | # MESHES 8 _____ | TWINE TYPE 14 | | |
| | Combination 98 _____ | | | MESH SIZE 9 _____ in | Single 1 _____ | | |
| | Other 99 _____ | | | | Double 2 _____ | | |
| WEIGHT OF ONE DOOR 3 kg | 4A _____ | | | | | | |
| COMMENTS | | | | GROUND GEAR | | MESH SIZE mm | |
| | | | | TYPE 10 | | 15 | |
| | | | | Ground Cable | | _____ | |
| | | | | Bridle/ Leg | | _____ | |
| | | | | Footrope | | _____ | |
| | | | | Unknown 0 _____ | | _____ | |
| | | | | Chain 1 _____ | | _____ | |
| | | | | Cable / Wire 2 _____ | | _____ | |
| | | | | Wrapped Cable 3 _____ | | _____ | |
| | | | | Rock Hopper 4 _____ | | _____ | |
| | | | | Roller 5 _____ | | _____ | |
| | | | | Rubber Cookie 6 _____ | | _____ | |
| | | | | Bobbin 7 _____ | | _____ | |
| | | | | None 8 _____ | | _____ | |
| | | | | Other 9 _____ | | _____ | |
| | | | | 10A _____ | | | |
| | | | | FLOATS | | MESH SIZE _____ mm | |
| | | | | Number 11 _____ | | USED? | |
| | | | | Diameter 12 _____ in | | STRENGTHENER 18 | |
| | | | | | | NO 0 _____ YES 1 _____ | |
| | | | | | | CHAFFING GEAR 19 | |
| | | | | | | NO 0 _____ YES 1 _____ | |
| | | | | | | GEAR MOUNTED ELECTRONICS | |
| | | | | | | 20 | |
| | | | | | | USED ? | |
| | | | | | | NO 0 _____ | |
| | | | | | | YES 1 _____ | |
| | | | | | | NUMBER OF TRANSDUCERS | |
| | | | | | | 21 | |
| | | | | | | TYPE 22 | |
| | | | | | | Unknown 0 _____ | |
| | | | | | | Wired 1 _____ | |
| | | | | | | Wireless 2 _____ | |
| | | | | | | BRAND 23 | |
| | | | | | | Unknown 0 _____ | |
| | | | | | | Furuno® 1 _____ | |
| | | | | | | Simrad® 2 _____ | |
| | | | | | | Other 9 _____ | |
| | | | | | | 23A _____ | |
| | | | | | | LOCATION 24 | |
| | | | | | | Unknown 0 _____ | |
| | | | | | | Headrope 1 _____ | |
| | | | | | | Wings 2 _____ | |
| | | | | | | Footrope 3 _____ | |
| | | | | | | Headrope & Footrope 4 _____ | |
| | | | | | | Other Combo 8 _____ | |
| | | | | | | Other 9 _____ | |
| | | | | | | 24A _____ | |
| | | | | | | # OF RECEIVERS | |
| | | | | | | 25 _____ | |
| | | | | | | EXCLUDER/SEPARATOR DEVICE 26 | |
| | | | | | | USED? NO 0 _____ YES 1 _____ | |
| | | | | | | TYPE 27 | |
| | | | | | | Unknown 0 _____ | |
| | | | | | | Nordmore Grate 1 _____ | |
| | | | | | | T.E.D. 2 _____ | |
| | | | | | | Separator Panel 3 _____ | |
| | | | | | | Guiding Device 4 _____ | |
| | | | | | | Raised Footrope 5 _____ | |
| | | | | | | Combination 8 _____ | |
| | | | | | | Other 9 _____ | |
| | | | | | | 27A _____ | |
| | | | | | | FISH OUTLET 28 | |
| | | | | | | USED? NO 0 _____ YES 1 _____ | |
| | | | | | | LENGTH 29 _____ in | |
| | | | | | | WIDTH 30 _____ in | |
| | | | | | | SHAPE 31 | |
| | | | | | | Unknown 00 _____ | |
| | | | | | | Rectangular 01 _____ | |
| | | | | | | Square 06 _____ | |
| | | | | | | Diamond 07 _____ | |
| | | | | | | Triangular 08 _____ | |
| | | | | | | Other 99 _____ | |
| | | | | | | 31A _____ | |
| | | | | | | LOCATION 32 | |
| | | | | | | Unknown 0 _____ | |
| | | | | | | Top 1 _____ | |
| | | | | | | Bottom 2 _____ | |
| | | | | | | Side 3 _____ | |
| | | | | | | Combination 8 _____ | |
| | | | | | | Other 9 _____ | |
| | | | | | | 32A _____ | |

| | |
|-------------------|---------|
| OBS/TRIP ID | D03006- |
| DATE LANDED mm/yy | 01 / 01 |

[illegible]

01/01/01

OBOTG

NMFS FISHERIES OBSERVER PROGRAM

TRAWL GEAR CHARACTERISTICS LOG

| GEAR NUMBER(S) | | | | | CONSTRUCTION MATERIAL | | LENGTH MEASUREMENTS | | CODEND | | GEAR MOUNTED ELECTRONICS | | EXCLUDER/SEPARATOR DEVICE | | | | | | |
|-------------------------------------|--|--|--|----------------------|-----------------------|----------|---------------------|----------|----------------------|-----------------|--------------------------|-------------|----------------------------|----------------|--------|---------|----------------------------|--------|---------|
| GEAR CODE | | | | | TYPE | NET BODY | CODEND | Headrope | _____ ft | HUNG | | USED ? | USED? NO 0 ____ YES 1 ____ | | | | | | |
| | | | | | Unknown | 00 | ____ | ____ | | Unknown | 0 ____ | NO 0 ____ | TYPE | | | | | | |
| | | | | | Nylon | 01 | ____ | ____ | Footrope/Sweep | _____ ft | Diamond | 1 ____ | YES 1 ____ | Unknown | 0 ____ | | | | |
| | | | | | Poly | 02 | ____ | ____ | Ground Cable | _____ ft | Square | 2 ____ | NUMBER OF | Nordmore Grate | 1 ____ | | | | |
| | | | | | Kevlar® | 03 | ____ | ____ | | Square, Wrapped | 3 ____ | TRANSDUCERS | T.E.D. | 2 ____ | | | | | |
| DOORS USED? NO 0 ____ YES 1 ____ | | | | | Spectra® | 04 | ____ | ____ | | Combination | 8 ____ | TYPE | Separator Panel | 3 ____ | | | | | |
| | | | | | Tenex® | 05 | ____ | ____ | | Double | 2 ____ | Unknown | 0 ____ | Guiding Device | 4 ____ | | | | |
| | | | | | Nomex® | 06 | ____ | ____ | | | Wired | 1 ____ | Raised Footrope | 5 ____ | | | | | |
| | | | | | Combination | 98 | ____ | ____ | | Wireless | 2 ____ | Combination | 8 ____ | | | | | | |
| | | | | | Other | 99 | ____ | ____ | | | | Other | 9 ____ | | | | | | |
| WEIGHT OF ONE DOOR _____ kg | | | | | | | FISHING CIRCLE | | | | | | | | | | | | |
| COMMENTS | | | | | GROUND GEAR | | | | MESH SIZE _____ mm | | BRAND | | FISH OUTLET | | | | | | |
| | | | | | TYPE | | | | GROUND CABLE | BRIDLE/ LEG | FOOTROPE | | | Unknown | | 0 ____ | USED? NO 0 ____ YES 1 ____ | | |
| | | | | | Unknown | | | | 0 ____ | ____ | ____ | | | Furuno® | | 1 ____ | LENGTH _____ in | | |
| | | | | | Chain | | | | 1 ____ | ____ | ____ | | | Simrad® | | 2 ____ | WIDTH _____ in | | |
| | | | | | Cable / Wire | | | | 2 ____ | ____ | ____ | | | Other | | 9 ____ | SHAPE | | |
| | | | | | Wrapped Cable | | | | 3 ____ | ____ | ____ | | | | | | Unknown | | 00 ____ |
| | | | | | Rock Hopper | | | | 4 ____ | ____ | ____ | | | LOCATION | | | Rectangular | | 01 ____ |
| | | | | | Roller | | | | 5 ____ | ____ | ____ | | | Unknown | | 0 ____ | Square | | 06 ____ |
| | | | | | Rubber Cookie | | | | 6 ____ | ____ | ____ | | | Headrope | | 1 ____ | Diamond | | 07 ____ |
| | | | | | Bobbin | | | | 7 ____ | ____ | ____ | | | Wings | | 2 ____ | Triangular | | 08 ____ |
| None | | | | 8 ____ | ____ | ____ | | | Footrope | | 3 ____ | Other | | 99 ____ | | | | | |
| Other | | | | 9 ____ | ____ | ____ | | | Headrope & Footrope | | 4 ____ | | | | | | | | |
| | | | | | | | | | LINER USED? | | Other Combo | | 8 ____ | LOCATION | | | | | |
| | | | | | | | | | NO 0 ____ | | | | Other | | 9 ____ | Unknown | | 0 ____ | |
| | | | | | | | | | YES 1 ____ | | | | | | | Top | | 1 ____ | |
| | | | | | | | | | | | | | | | | Bottom | | 2 ____ | |
| | | | | | | | | | | | | | | | | Side | | 3 ____ | |
| | | | | | FLOATS | | | | MESH SIZE _____ mm | | # OF RECEIVERS | | | | | | | | |
| | | | | | Number _____ | | | | USED? | | | | | | | | | | |
| | | | | | Diameter _____ in | | | | STRENGTHENER | | | | | | | | | | |
| | | | | | | | | | NO 0 ____ YES 1 ____ | | | | | | | | | | |
| | | | | | | | | | CHAFFING GEAR | | | | | | | | | | |
| | | | | NO 0 ____ YES 1 ____ | | | | | | | | | | | | | | | |

PAIR TRAWL GEAR CHARACTERISTICS LOG

This log contains detailed questions about the gear fished. Complete a new log for each uniquely configured gear (as defined below) **hauled** during a trip. These unique configurations may be based on changes made to the length of the headrope, mesh size in the codend, *etc.* Any changes in these fields require the completion of another Pair Trawl Gear Characteristics Log. Do not use the COMMENTS section to explain these differences between gears. Number each gear configuration sequentially.

If the gear is set out and hauled more than once during a trip, do not complete a new Pair Trawl Gear Characteristics Log for the multiple hauls. Rather, record on the Trawl Haul Log which gear numbers are being hauled. In addition, record any other information necessary to understand the manner in which the gear was set/hauled in COMMENTS.

If the vessel has two or more identical gears which are hauled during the trip, complete only one Pair Trawl Gear Characteristics Log and record the consecutively assigned numbers of all identical gears described in GEAR NUMBER(S) (#1). See the pair trawl definitions below and GEAR NUMBER(S) (#1) for more information on defining and numbering gears.

If information is unavailable or unknown to any question except a “No/Yes” question, record a dash (-) in the field. If the answer to a “No/Yes” question is unknown, record a “9” on the line next to the code for “No” to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered “No”, leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Pair Trawl: Two vessels towing a single net. The spread and depth of the net is controlled by adjusting the speed of the boats and the distance between them.

See Figure 1.

Codend: Two rectangular pieces of netting made with heavy twine. The top edges are joined to the narrow end of the bellies, the selvages are laced together, and a “codline” or codend clip is woven through the lower meshes for securing the section into a bag where the fish are held until released onboard the trawler.

Fishing Circle: The section of the net located behind the wings and before the belly. It is the area which creates the largest opening in the net. See Figure 10.

Headrope: The line, generally of fiber rope or steel wire rope, which fits along the top wings and center part of the square to form the upper lip of the pair trawl.

Fish Outlet: Used in conjunction with an excluder device in order to provide an opening in the net to facilitate escape of fish, sea turtles, *etc.* See Figure 11.

Blowout: Generally made with a lighter material than the rest of the net, these net sections are used for maintaining the net’s shape and stability as it is pulled through the water. See Figure 4.

Gear: A trawl, commonly referred to as “the net”. This includes the headrope, footrope, floats, weights, netting and any other attached equipment.

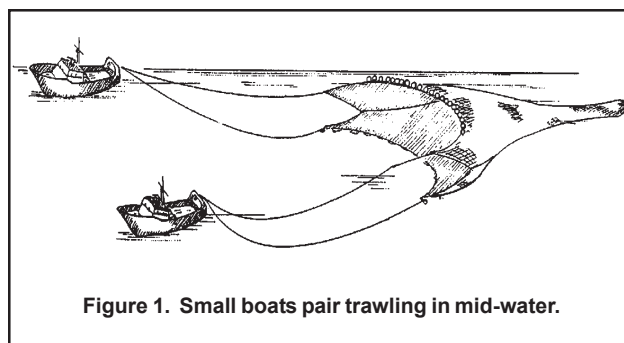


Figure 1. Small boats pair trawling in mid-water.

INSTRUCTIONS

For instructions on completing the Header fields **A, B and D** refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

GEAR INFORMATION

1. GEAR NUMBER(S): Record the consecutive number(s) assigned to each uniquely configured gear hauled and for which characteristics are described. See the definition of gear in the introduction.

NOTE: If two or more identical gears are used, assign consecutive numbers to each gear and record all of these numbers on one Pair Trawl Gear Characteristics Log. Only one Pair Trawl Gear Characteristics Log is needed to record the characteristics and assigned numbers for all identical gears used.

Example: The first uniquely configured gear is "1", and its characteristics will be recorded on one Pair Trawl Gear Characteristics Log. One other net is used during the trip. It differs from #1 so it is "2", and its characteristics are recorded on a second Pair Trawl Gear Characteristics Log.

2. NET NAME: Record the common name of the net. If it does not have a common name, record the manufacturer's name and any other available means of identification.

Examples: Shuman 58 X 54cm Midwater.
Drezen Pelagique 133.8 X 18m.

3. NET BUILDER: Record the name of the company or individual who made this net.

Example: Shuman.

4. YEAR NET MADE: Record the four digit year the net was made.

Example: 2000.

5. GEAR FISHED: Record how this gear is fished by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Pelagic, or in the water column, with the net never coming in contact with the seabed.
- 2 = Semi-pelagic, or in the water column, with the net seldom coming in contact with the seabed.
- 3 = Bottom, or with the net constantly in contact with the seabed.

- 9 = Other, record how the gear is fished on line 5A.

NET

6. CONSTRUCTION: Record the type of net construction (see Figure 2) used in the forward portion of the net by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Rope/Large Mesh.
- 2 = Parallel Rope Trawl.
- 9 = Other, record the net type on line 6A.

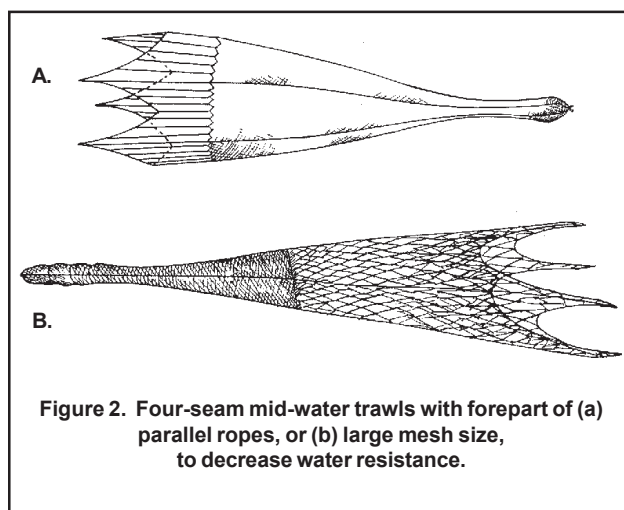


Figure 2. Four-seam mid-water trawls with forepart of (a) parallel ropes, or (b) large mesh size, to decrease water resistance.

7. DESIGN: Record the construction design of this net by placing an "X" next to the appropriate code:

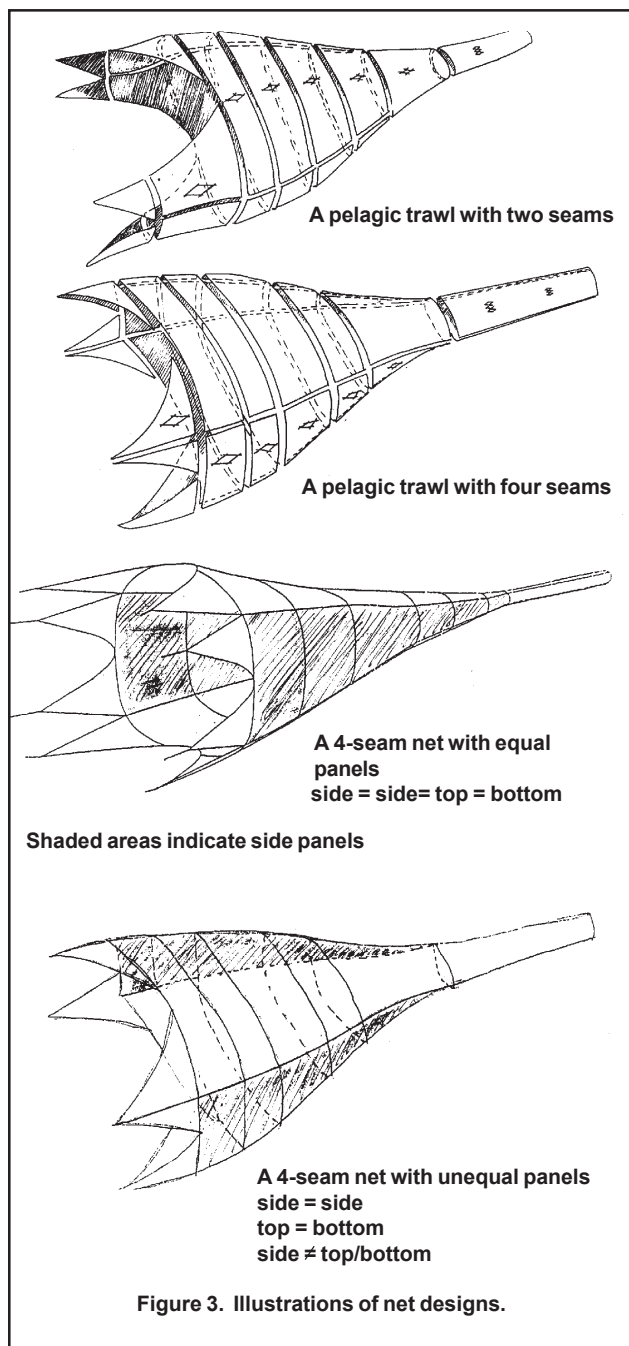
- 0 = Unknown.
- 1 = 2 Seam.
- 2 = 4 Seam, Equal Panels.
- 3 = 4 Seam, Unequal Panels.
- 9 = Other, record the net construction design on line 7A.

NOTE: See Figure 3 for illustrations of net designs.

8. MINIMUM MESH SIZE: Record, to the nearest tenth of an inch, the minimum inside mesh measurement in this net (not including the codend). This information may be obtained from the captain.

9. MAXIMUM MESH SIZE: Record, to the nearest tenth of an inch, the maximum inside mesh mea-

surement in this net (typically found in the forward section of the net). This information may be obtained from the captain.



WEIGHTS

10. USED?: Record whether weights are used on this gear by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

11. WEIGHT: Record, in whole pounds, the **total** poundage of **all** weights used on this gear. This information may be obtained from the captain.

12. WEIGHT - ACTUAL OR ESTIMATED: Record whether the weight recorded in #11 is an actual or estimated weight by placing an "X" next to the appropriate code:

1 = Actual.

2 = Estimated.

CONSTRUCTION MATERIAL

13. TYPE: Record the type of construction material used in the body of the net (not including the codend) and the codend by placing an "X" next to the appropriate code:

00 = Unknown.

01 = Nylon.

02 = Poly.

03 = Kevlar®.

04 = Spectra®.

05 = Tenex®.

06 = Nomex®.

98 = Combination, record all construction material types on line 13A.

99 = Other, record the construction material type on line 13A.

BUOYANCY/RELEASE DEVICES

14. FLOATS USED?: Record whether floats are used on this gear by placing an "X" next to the appropriate code:

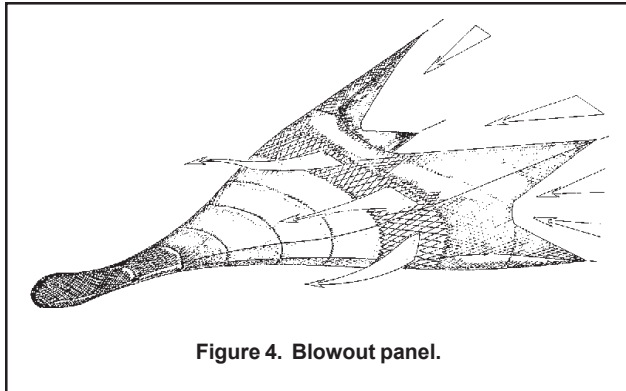
0 = No.

1 = Yes.

15. BLOWOUT USED?: Record whether a "blow-out" section (see Figure 4) is used in this gear by placing an "X" next to the appropriate code:

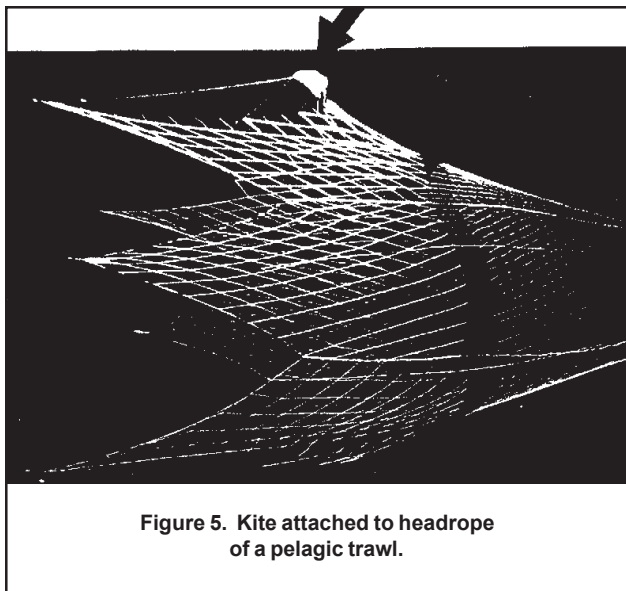
0 = No.

1 = Yes.



16. KITE USED?: Record whether a kite(s) (see Figure 5) is (are) used in this net by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.



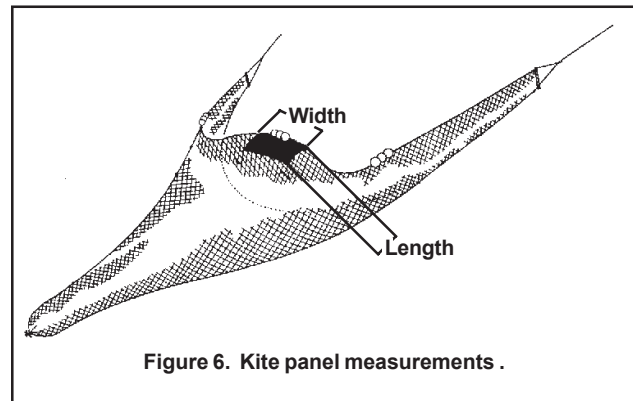
KITE PANEL

17. NUMBER: Record the **total** number of panels used in a kite in this net.

18. LENGTH: Record, in whole inches, the average length of the panels used in a kite in this net. This measurement will be taken along the edge of the panel which is perpendicular to the headrope. See Figure 6.

19. WIDTH: Record, in whole inches, the average

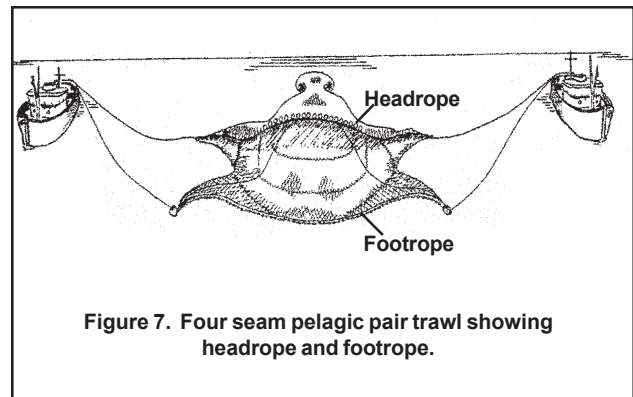
width of the panels used in a kite in this net. This measurement will be taken along the edge of the panel which is parallel to the headrope. See Figure 6.



LENGTH MEASUREMENTS

20. HEADROPE: Record, in whole feet, the length of the rope along the top of the net. This information may be obtained from the captain. See Figure 7.

21. FOOTROPE/SWEEP: Record, in whole feet, the length of the rope along the bottom of the net. This information may be obtained from the captain. See Figure 7.



22. TOP BRIDLE: Record, in whole fathoms, the length of the top bridle. This information may be obtained from the captain. See Figure 9.

23. WING BRIDLE: Record, in whole fathoms, the length of a wing bridle. This information may be obtained from the captain. See Figure 9.

24. BOTTOM BRIDLE: Record, in whole fathoms, the length of a bottom bridle. This information may be obtained from the captain. See Figure 9.

BRIDLES

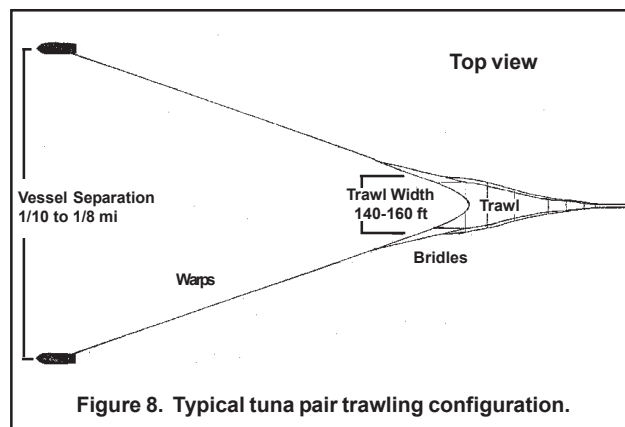
25. BRIDLES PER WARP: Record the number of bridles attached to each warp. This information may be obtained by reviewing the net plans or from the captain. See Figures 8 and 9.

26. BRIDLES PER SIDE: Record the number of wings or bridles found on **one** side (left or right) of the net. See Figures 8 and 9.

27. WARPS PER BOAT: Record the number of warps fished by each boat. See Figures 8 and 9.

FISHING CIRCLE

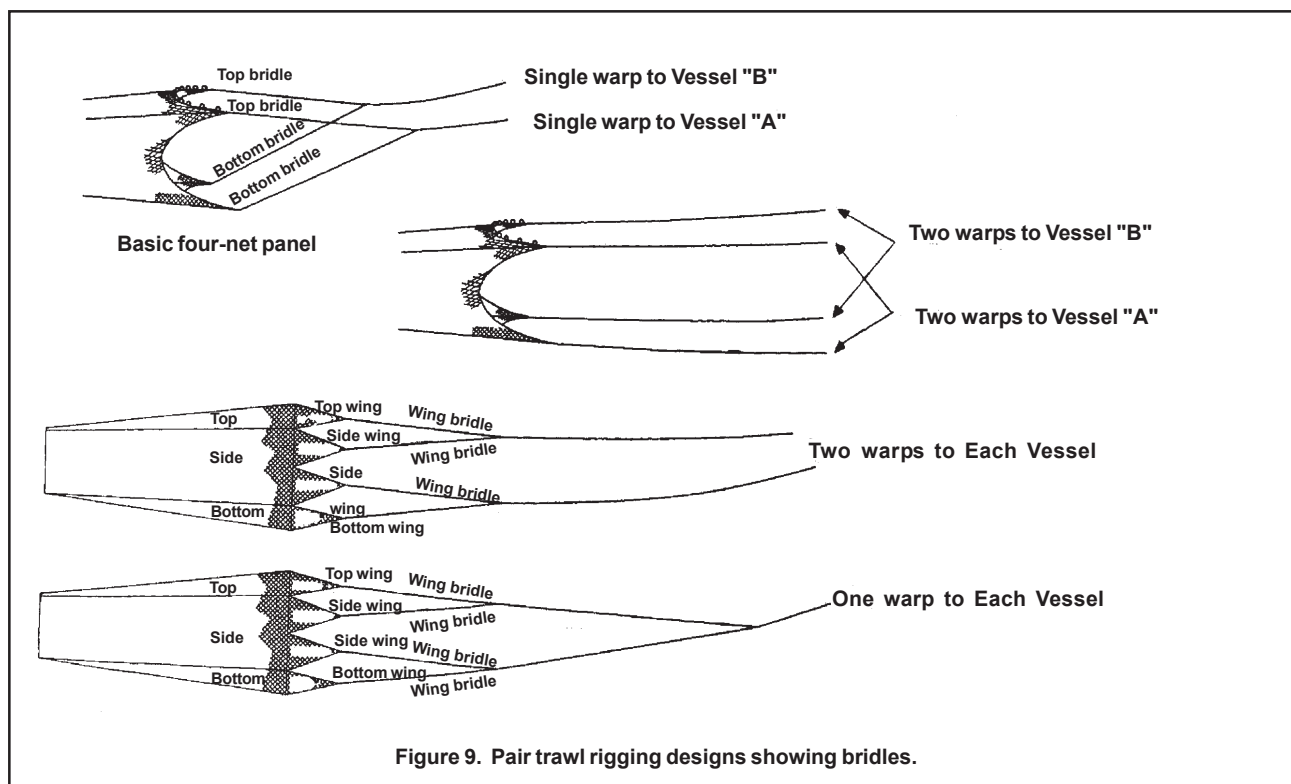
28. NUMBER OF MESHES: Record the number of meshes in the fishing circle. This information may be obtained from the captain. Do not include the meshes in the gore. See the definition of fishing circle in the introduction and Figure 10.



NOTE: The Shuman pelagic nets generally have no gore meshes. The “French” net may have up to 20% in the gore meshes.

29. MESH SIZE: Record, in whole centimeters, the predominant **inside** mesh measurement from the fishing circle. This information may be obtained from the captain. See the definition of fishing circle in the introduction and Figure 10.

NOTE: See Figure 2 in the Otter Trawl Gear Characteristics Log Instructions for an illustration of mesh measurement.



CODEND

30. HUNG: Record the hanging configuration of the codend by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Diamond.
- 2 = Square.
- 3 = Square, Wrapped.
- 8 = Combination, record the hanging configuration in COMMENTS.

NOTE: If the codend is wrapped, this is considered chaffing gear. Be sure to record "Yes" (1) for CHAFFING GEAR USED (#36).

NOTE: See Figure 10 for the location of the codend, and Figure 2 in the Otter Trawl Gear Characteristics Log Instructions for an illustration of diamond and square hanging configurations.

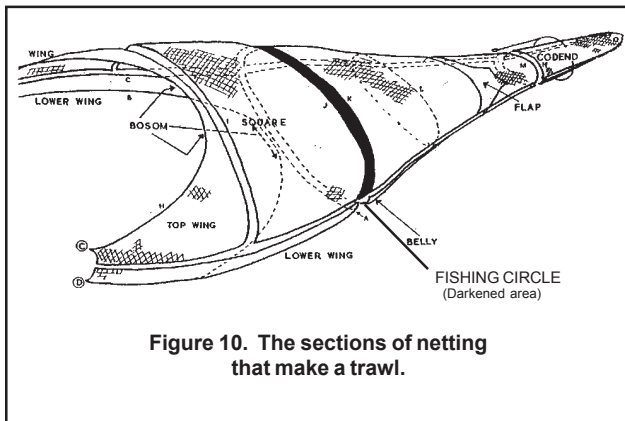


Figure 10. The sections of netting that make a trawl.

31. TWINE TYPE: Record whether the twine used in the codend is single or double stranded by placing an "X" next to the appropriate code:

- 1 = Single.
- 2 = Double.

32. MESH SIZE: Record, in whole millimeters, ten randomly selected **inside** mesh measurements from the codend. These measurements should be taken inside from knot to knot, in the direction in which the mesh is hung. Use calipers for these measurements.

NOTE: These measurements are **not** bar lengths.

NOTE: See Figure 2 in the Otter Trawl Gear Characteristics Log instructions for an

illustration of mesh measurement. See also Appendix P. Vernier Caliper Instructions for further information.

33. LINER USED?: Record whether a liner is used in the net's codend by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

34. MESH SIZE: Record, in whole millimeters, a randomly selected **inside** mesh measurement from the liner in the codend. Use calipers for this measurement.

NOTE: See Figure 2 in the Otter Trawl Gear Characteristics Log for an illustration of mesh measurement. See also Appendix P. Vernier Caliper Instructions for further information.

35. STRENGTHENER USED?: Record whether strengthener material is used in the codend of this net by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

36. CHAFFING GEAR USED?: Record whether chaffing gear is used on the codend by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

NOTE: A codend in which the meshes are "wrapped" is considered to have chaffing gear.

GEAR MOUNTED ELECTRONICS

37. USED?: Record whether any transducers are used on this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

38. NUMBER OF TRANSDUCERS: Record the number of transducers used on this gear.

39. TYPE: Record the type of transducer used on this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Wired.

2 = Wireless.

40. BRAND: Record the brand of transducers used on this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Furuno®.
- 2 = Simrad®.
- 9 = Other, record the transducer brand on line 40A.

41. LOCATION: Record the location of transducers used on this gear by placing an "X" next to the appropriate code:

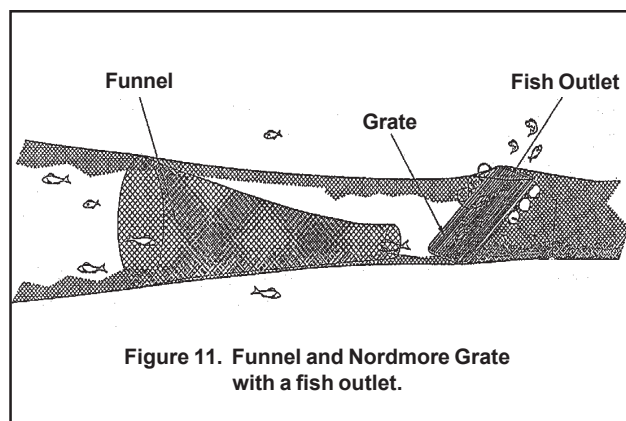
- 0 = Unknown.
- 1 = Headrope.
- 2 = Wings.
- 3 = Footrope.
- 4 = Headrope and Footrope.
- 8 = Other Combination, record the transducer locations on line 41A.
- 9 = Other, record the transducer location on line 41A.

42. NUMBER OF RECEIVERS: Record the **total** number of receivers used on **both** vessels for the transducer(s).

EXCLUDER/SEPARATOR DEVICE

43. USED?: Record whether an excluder or separator device (see Figure 11) is used on this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.



44. TYPE: Record the type of excluder or separator device used on this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Nordmore Grate (see Figure 11).
- 2 = T.E.D.
- 3 = Separator Panel.
- 4 = Guiding Device, *i.e.* a funnel or "flap" (see Figure 10 and 11).
- 8 = Combination, record all excluder/separator device types on line 44A (see Figure 11).
- 9 = Other, record the excluder/separator device type on line 44A.

FISH OUTLET

45. USED?: Record whether a fish outlet (see Figure 11) is used on this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

46. LENGTH: Record, in whole inches, the length of the fish outlet from the front to the back of the net.

NOTE: If the outlet shape is triangular, record the length of the side of the triangle which runs from the front to back of the net.

47. WIDTH: Record, in whole inches, the width of the fish outlet from side to side of the net.

NOTE: If the outlet shape is triangular, record the length of the side of the triangle which runs from side-to-side in the net.

48. SHAPE: Record the shape of the fish outlet by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Rectangular.
- 06 = Square.
- 07 = Diamond.
- 08 = Triangular.
- 99 = Other, record the fish outlet shape on line 48A.

49. LOCATION: Record the location of the fish outlet used on this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.

- 1 = Top.
- 2 = Bottom.
- 3 = Side.
- 8 = Combination, record all fish outlet locations on line 49A.
- 9 = Other, record the fish outlet location on line 49A.

COMMENTS

Record any additional information about this gear, *i.e.* unusual arrangements of the gear. Provide a sketch of the bridle arrangement. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

PAIR TRAWL GEAR CHARACTERISTICS LOG

| | |
|-------------------|------------|
| OBS/TRIP ID | A |
| DATE LANDED mm/yy | B / |

| GEAR NUMBER (S) | | GEAR CODE | NET NAME | NET BUILDER | YEAR NET MADE | GEAR MOUNTED ELECTRONICS | EXCLUDER/SEPARATOR DEVICE |
|-------------------------------|--|---------------------------------|----------|----------------------------|------------------------|----------------------------|----------------------------|
| 1 | | D | 2 | 3 | 4 | | |
| GEAR FISHED 5 | | CONSTRUCTION MATERIAL | | LENGTH MEASUREMENTS | CODEND | USED ? 37 | TYPE 44 |
| Unknown 0 ____ | | TYPE 13 NET BODY CODEND | | Headrope 20 ft | HUNG 30 | NO 0 ____ | Unknown 0 ____ |
| Pelagic 1 ____ | | | | Footrope/Sweep 21 ft | Unknown 0 ____ | YES 1 ____ | Nordmore Grate 1 ____ |
| Semi-Pelagic 2 ____ | | Unknown 00 ____ | | Top Bridle 22 fm | Diamond 1 ____ | NUMBER OF TRANSDUCERS | T.E.D. 2 ____ |
| Bottom 3 ____ | | Nylon 01 ____ | | Wing Bridle 23 fm | Square 2 ____ | | Separator Panel 3 ____ |
| Other 9 ____ | | Poly 02 ____ | | Bottom Bridle 24 fm | Square, Wrapped 3 ____ | | Guiding Device 4 ____ |
| 5A | | Kevlar® 03 ____ | | | Combination 8 ____ | 38 | Combination 8 ____ |
| | | Spectra® 04 ____ | | | | | Other 9 ____ |
| NET 6 | | Tenex® 05 ____ | | | TWINE TYPE 31 | TYPE 39 | 44A |
| CONSTRUCTION | | Nomex® 06 ____ | | | Single 1 ____ | Unknown 0 ____ | |
| Unknown 0 ____ | | Combination 98 ____ | | | Double 2 ____ | Wired 1 ____ | |
| Rope/Large Mesh 1 ____ | | Other 99 ____ | | | | Wireless 2 ____ | |
| Parallel Rope Trawl 2 ____ | | 13A | | BRIDLES | MESH SIZE mm | BRAND 40 | FISH OUTLET 45 |
| Other 9 ____ | | | | NUMBER | 32 | Unknown 0 ____ | USED? NO 0 ____ YES 1 ____ |
| 6A | | BUOYANCY/RELEASE DEVICES | | BRIDLES/WARP 25 | | Furuno® 1 ____ | LENGTH 46 in |
| | | USED? NO YES | | BRIDLES/SIDE 26 | | Simrad® 2 ____ | WIDTH 47 in |
| DESIGN 7 | | FLOATS 0 1 14 | | WARPS/BOAT 27 | | Other 9 ____ | SHAPE 48A |
| Unknown 0 ____ | | BLOWOUT 0 1 15 | | | | | Unknown 00 ____ |
| 2 Seam 1 ____ | | KITE 0 1 16 | | FISHING CIRCLE | | LOCATION 41 | Rectangular 01 ____ |
| 4 Seam, Equal Panels 2 ____ | | KITE PANEL | | # MESHES 28 | | Unknown 0 ____ | Square 06 ____ |
| 4 Seam, Unequal Panels 3 ____ | | Number 17 | | MESH SIZE 29 cm | | Headrope 1 ____ | Diamond 07 ____ |
| Other 9 ____ | | Length in 18 | | | LINER USED? 33 | Wings 2 ____ | Triangular 08 ____ |
| 7A | | Width in 19 | | | NO 0 ____ | Footrope 3 ____ | Other 99 ____ |
| | | COMMENTS | | | YES 1 ____ | Headrope & Footrope 4 ____ | 48A |
| MESH SIZE | | | | | | Other Combo 8 ____ | |
| Minimum . in 8 | | | | | MESH SIZE 34 mm | Other 9 ____ | LOCATION 49 |
| Maximum . in 9 | | | | | | | Unknown 0 ____ |
| WEIGHTS 10 | | | | | USED? | 41A | Top 1 ____ |
| USED? NO 0 YES 1 | | | | | | | Bottom 2 ____ |
| WEIGHT 11 lb | | | | | STRENGTHENER 35 | # OF RECEIVERS | Side 3 ____ |
| Actual 1 12 | | | | | NO 0 YES 1 | | Combination 8 ____ |
| Estimated 2 | | | | | CHAFFING GEAR 36 | 42 | Other 9 ____ |
| | | | | | NO 0 YES 1 | | 49A |

NMFS FISHERIES OBSERVER PROGRAM

PAIR TRAWL GEAR CHARACTERISTICS LOG

| | |
|-------------------|---------|
| OBS/TRIP ID | A39013- |
| DATE LANDED mm/yy | 09 / 01 |

| | | | | | | |
|--|--|------------------------------|---|---|--|---|
| GEAR NUMBER (S) 2 | GEAR CODE 170 | NET NAME 48 X 1596 | NET BUILDER Shuman Trawl | YEAR NET MADE 2000 | GEAR MOUNTED ELECTRONICS USED? NO 0 <u> </u> YES 1 <u>X</u> | EXCLUDER/SEPARATOR DEVICE USED? NO 0 <u>X</u> YES 1 <u> </u> |
| GEAR FISHED Unknown 0 <u> </u> Pelagic 1 <u>X</u> Semi-Pelagic 2 <u> </u> Bottom 3 <u> </u> Other 9 <u> </u> | CONSTRUCTION MATERIAL TYPE NET BODY CODEND Unknown 00 <u> </u> <u> </u> Nylon 01 <u> </u> <u> </u> Poly 02 <u> </u> <u>X</u> Kevlar® 03 <u> </u> <u> </u> Spectra® 04 <u> </u> <u> </u> Tenex® 05 <u> </u> <u> </u> Nomex® 06 <u> </u> <u> </u> Combination 98 <u>X</u> <u> </u> Other 99 <u> </u> <u> </u> | | LENGTH MEASUREMENTS Headrope <u>348</u> ft Footrope/Sweep <u>348</u> ft Top Bridle <u>25</u> fm Wing Bridle <u> </u> fm Bottom Bridle <u>25</u> fm | CODEND HUNG Unknown 0 <u> </u> Diamond 1 <u> </u> Square 2 <u>X</u> Square, Wrapped 3 <u> </u> Combination 8 <u> </u> TWINE TYPE Single 1 <u> </u> Double 2 <u>X</u> | NUMBER OF TRANSDUCERS <u>1</u> TYPE Unknown 0 <u> </u> Wired 1 <u>X</u> Wireless 2 <u> </u> | TYPE Unknown 0 <u> </u> Nordmore Grate 1 <u> </u> T.E.D. 2 <u> </u> Separator Panel 3 <u> </u> Guiding Device 4 <u> </u> Combination 8 <u> </u> Other 9 <u> </u> |
| NET CONSTRUCTION Unknown 0 <u> </u> Rope/Large Mesh 1 <u>X</u> Parallel Rope Trawl 2 <u> </u> Other 9 <u> </u> | BUOYANCY/RELEASE DEVICES USED? NO YES FLOATS 0 <u> </u> 1 <u>X</u> BLOWOUT 0 <u>X</u> 1 <u> </u> KITE 0 <u> </u> 1 <u>X</u> KITE PANEL Number <u>7</u> Length <u>41</u> in Width <u>33</u> in | | BRIDLES NUMBER BRIDLES/WARP <u>2</u> BRIDLES/SIDE <u>4</u> WARPS/BOAT <u>1</u> | MESH SIZE mm <u>243</u> <u>230</u> <u>209</u> <u>208</u> <u>236</u> <u>220</u> <u>238</u> <u>226</u> <u>230</u> <u>248</u> | BRAND Unknown 0 <u> </u> Furuno® 1 <u>X</u> Simrad® 2 <u> </u> Other 9 <u> </u> | FISH OUTLET USED? NO 0 <u>X</u> YES 1 <u> </u> LENGTH <u> </u> in WIDTH <u> </u> in SHAPE Unknown 00 <u> </u> Rectangular 01 <u> </u> Square 06 <u> </u> Diamond 07 <u> </u> Triangular 08 <u> </u> Other 99 <u> </u> |
| DESIGN Unknown 0 <u> </u> 2 Seam 1 <u> </u> 4 Seam, Equal Panels 2 <u> </u> 4 Seam, Unequal Panels 3 <u>X</u> Other 9 <u> </u> | COMMENTS | | FISHING CIRCLE # MESHES <u>48</u> MESH SIZE <u>1341</u> cm | LINER USED? NO 0 <u>X</u> YES 1 <u> </u> MESH SIZE <u> </u> mm USED? STRENGTHENER NO 0 <u>X</u> YES 1 <u> </u> CHAFFING GEAR NO 0 <u>X</u> YES 1 <u> </u> | LOCATION Unknown 0 <u> </u> Headrope 1 <u> </u> Wings 2 <u> </u> Footrope 3 <u>X</u> Headrope & Footrope 4 <u> </u> Other Combo 8 <u> </u> Other 9 <u> </u> # OF RECEIVERS <u>2</u> | LOCATION Unknown 0 <u> </u> Top 1 <u> </u> Bottom 2 <u> </u> Side 3 <u> </u> Combination 8 <u> </u> Other 9 <u> </u> |
| MESH SIZE Minimum <u>8.0</u> in Maximum <u>1056.0</u> in | | | | | | |
| WEIGHTS USED? NO 0 <u> </u> YES 1 <u>X</u> WEIGHT <u>2010</u> lbs Actual 1 <u> </u> Estimated 2 <u>X</u> | | | | | | |

| | |
|-------------------|---|
| OBS/TRIP ID | |
| DATE LANDED mm/yy | / |

64

TRAWL HAUL LOG

This log contains detailed questions about the setting and hauling of gear, and the haul's catch. Complete a new log after each hauling of gear. If you feel that you cannot go on deck for weather related safety reasons, record as much information on this log as possible (*i.e.* Header Information, weather, depths, times, positions, *etc.*).

If the gear is set, and only partially hauled back, include the time spent hauling and resetting the net in this haul's time. Record END TIME (#4) when the net is completely brought onboard.

The species summary section of this log should be used to record catches of groundfish species, debris and shells only. If any pelagic species (*i.e.* swordfish, billfish, tuna, bonito, sharks, *etc.*), sturgeons, rays or tagged fish are caught in this haul, an Individual Animal Log must be completed to provide information on each animal caught by the gear. This Trawl Haul Log will serve as a cover sheet for any Individual Animal Log(s) corresponding to this haul that may follow. All marine mammals, sea turtles, and sea birds caught in the gear must be recorded on a Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

In the **pelagic pair trawl fishery**, also record debris on the Individual Animal Log. When the net is taken by the other vessel, the haul is recorded as **unobserved** and only the **kept** information for the haul should be recorded in the species section of the log.

If there are insufficient lines on one form for all species caught in this haul, continue listing species on an additional Trawl Haul Log making sure to complete all of the Header Information (A-C) and HAUL NUMBER (E).

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that a field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

OTTER TRAWL

Haul Begin: First component of net deployed, *i.e.* net hits the water.

Haul End: Hauling equipment put into gear.

PAIR TRAWL

Haul Begin: First component of net deployed, *i.e.* net hits the water and cable (wire) begins to be paid out.

Haul End: Net retrieved to the surface, *i.e.* legs retrieved and aboard both vessels.

NOTE: The cables (wires) and net are usually hauled back alternating between vessels throughout the trip. The observer is expected to see all, or a majority of, the hauls occurring on the vessel to which he/she is deployed.

INSTRUCTIONS

For instructions on completing fields **A-W**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the gear number used for this haul as uniquely identified on the appropriate Trawl Gear Characteristics Log(s).

2. GEAR CONDITION: Indicate the condition of the gear at haulback, even if this was the condition of the gear when set, by recording the most appropriate two digit code listed below, and in Appendix J. Gear Condition Codes:

- 00 = Unknown.
- 01 = No gear damage, or very few small, scattered holes.
- 02 = Wings twisted or torn, not exceeding 50% of meshes.
- 03 = Wings twisted or torn, exceeding 50% of meshes.

- 04 = Square and/or bosom torn, not exceeding 50% of meshes.
- 05 = Square and/or bosom torn, exceeding 50% of meshes.
- 06 = Belly torn, not exceeding 25% of meshes.
- 07 = Belly torn, exceeding 25% of meshes.
- 08 = Codend and/or extension piece torn, not exceeding 10% of meshes.
- 09 = Codend and/or extension piece torn, exceeding 10% of meshes.
- 10 = Hang-up, causing gear to be hauled back before scheduled time; minor damage.
- 11 = Parted legs, sweep, or headrope.
- 12 = Tear up exceeding gear condition of code 02, but not total net destruction.
- 13 = Obstruction in the gear, such as a large amount of fixed gear, boulders, *etc.*
- 14 = Crossed doors.
- 15 = Open codend.
- 16 = Major hang-up, tear-up, or loss of gear.
- 17 = Grate clogged with fish or debris.
- 99 = Other, specify in COMMENTS.

3. BEGIN/END DATE: Record the month, day, and year, based on local time, that this haul began and ended.

4. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000-2359), that this haul began and ended, *i.e.* when the first component of the net is deployed, or the net hits the water (Haul Begin) and when the hauling equipment is put into gear (**otter trawl**) or the net is retrieved to the surface (**pair trawl**) (Haul End).

5. HAUL END WATER TEMPERATURE: Record, to the nearest tenth of a degree Fahrenheit, the surface water temperature when this haul **ended**.

NOTE: If this temperatures is obtained in Celsius, use Appendix Q. Conversion Tables to convert it to Fahrenheit.

NOTE: Use a "ScoopMaster" thermometer to obtain this temperature.

NOTE: If an incidental take occurs in this haul, a HAUL END WATER TEMPERATURE **must** be recorded.

6. TOW SPEED: Record, to the nearest tenth of a knot, the average towing speed, over the bottom, for this haul.

7. WIRE OUT: Record, in whole fathoms, the amount of wire paid out for this haul. This measurement is taken from the towing blocks to the trawl doors. This information may be obtained from the captain.

8. DEPTH RANGE, HEADROPE: (for pair trawl trips only) Record, in whole fathoms, the range of depths (shallowest to deepest), from the surface, the headrope fished for this haul. This information should be obtained from the captain or the transducer screen/printout.

9. DISTANCE RANGE BETWEEN BOATS: (for pair trawl trips only) Record, in whole feet, the range of distances (shortest to longest) between the two boats while fishing. This information should be obtained from the captain.

COMMENTS

Record any additional information regarding this haul, *i.e.* unusual species caught, uncommon catches, tear-ups, levels of bycatch when a Nordmore grate is used, *etc.* If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

TRAWL HAUL LOG

| | |
|-------------------|-------------|
| OBS/TRIP ID | A |
| DATE LANDED mm/yy | B / |
| PAGE # | C of |

[illegible]

12/01/03

OBOTH, OBPRH, OBHAU, OBSPP

NMFS FISHERIES OBSERVER PROGRAM

TRAWL HAUL LOG

| | |
|-------------------|---------|
| OBS/TRIP ID | D03006- |
| DATE LANDED mm/yy | 01 / 01 |
| PAGE # | 1 of 1 |

| | | | | | | | | | | | |
|-----------------|---------------|---------------|--|--|--|--------------|---------------------|--|-------------|-------------------|----------------|
| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS ? | CATCH ? | INC TAKE ? | WEATHER CODE | WIND | | WAVE HEIGHT | DEPTH, HAUL BEGIN | GEAR COND CODE |
| 050 | 1 | 3 | NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | NO 0 <input checked="" type="checkbox"/> YES 1 <input type="checkbox"/> | 01 | SPEED | DIRECTION | 3 | 9 | 10 |
| | | | | | | | | 5 kn | 320 ° | ft | fm |
| HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | | | WATER TEMP | TOW SPEED | WIRE OUT |
| BEGIN | 01 / 16 / 01 | 13 : 07 | STATION 1 | LATITUDE / Bearing | | STATION 2 | LONGITUDE / Bearing | | fahrenheit | 2.7 | 75 |
| | | | | 35 38.3 | | | | 75 17.3 | | kn | fm |
| END | 01 / 16 / 01 | 14 : 12 | | | 35 34.2 | | | 75 19.9 | 54.0 ° | Summer Flounder | |
| SPECIES | | | CATCH DISP | POUNDS | DISP | WEIGHT | | COMMENTS Hung up on old wreck; no damage. | | | |
| NAME | | CODE | K / D | | CODE | D/R | A/E | | | | |
| Summer Flounder | | | K | 270 | 100 | R | E | | | | |
| Summer Flounder | | | D | 3.4 | 012 | R | A | | | | |
| Spiny Dogfish | | | D | 50 | 014 | R | E | | | | |
| Smooth Dogfish | | | D | 20 | 001 | R | E | | | | |
| Clearnose Skate | | | D | 200 | 001 | R | E | DEPTH RANGE, HEADROPE (pair trawl trips only) | | | |
| | | | | | | | | — fm | | | |
| | | | | | | | | DISTANCE RANGE BETWEEN BOATS (pair trawl trips only) | | | |
| | | | | | | | | — ft | | | |
| SPECIES | | | CATCH DISP | POUNDS | DISP | WEIGHT | | | | | |
| NAME | | CODE | K / D | | CODE | D/R | A/E | | | | |
| Sheepshead | | | K | 50 | 100 | R | E | | | | |
| Sand Dab Fldr. | | | D | 1.5 | 012 | R | A | | | | |
| Conch, nk | | | D | 30 | 001 | R | E | | | | |
| Lizardfish | | | D | 0.2 | 001 | R | A | | | | |
| | | | | | | | | | | | |
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NMFS FISHERIES OBSERVER PROGRAM**TRAWL HAUL LOG**

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|-----------|------------------|------------------|--|------------------------------------|---------------------------------------|--------------|---------------------|--|--------------------------|-------------------|-------------------------|----------------|-----|
| | | | | | | | | | | OBS/TRIP ID | | | |
| | | | | | | | | | | DATE LANDED mm/yy | | / | |
| | | | | | | | | | | PAGE # | | of | |
| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS ? NO 0 ____ YES 1 ____ | CATCH ? NO 0 ____ YES 1 ____ | INC TAKE ? NO 0 ____ YES 1 ____ | WEATHER CODE | WIND SPEED kn | | DIRECTION O | WAVE HEIGHT ft | DEPTH, HAUL BEGIN fm | GEAR COND CODE | |
| HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | | | WATER TEMP fahrenheit | TOW SPEED kn | WIRE OUT fm | | |
| BEGIN | / / | : | 9960- | | | 9960- | | | | | | | |
| END | / / | : | 9960- | | | 9960- | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | COMMENTS | | | | | | | |
| NAME | CODE | K / D | | CODE | D/R | | | | | | | | A/E |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | | | | | | | |
| NAME | CODE | K / D | | CODE | D/R | | | | | | | | A/E |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | | | | | | | |
| NAME | CODE | K / D | | CODE | D/R | | | | | | | | A/E |
| | | | | | | | | | | | | | |
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SCALLOP DREDGE GEAR CHARACTERISTICS LOG

This log contains detailed questions about the gear fished. This log will also be used to collect information on mussel dredge gear. Complete a new log for each uniquely configured gear (as defined below) **hailed** during a trip. These unique configurations may be based on variables such as frame height, frame width, number of tickler chains, *etc.* Any changes in these fields require completion of a new Scallop Dredge Gear Characteristics Log. Number each gear configuration sequentially.

Note that a scallop gear is defined as a distinct combination of scallop dredges (port and starboard) deployed during the trip. Both port and starboard dredges, if used, will be described.

If a gear is set out and hauled more than once during a trip, do not complete a new Scallop Dredge Gear Characteristics Log for *each haul* rather record on the Scallop Dredge Haul Log which gear number *was* being hauled. In addition, record any other information necessary to understand the manner in which the gear was set/hailed in COMMENTS.

If information is unavailable or unknown to any question except a “No/Yes” question, record a dash (-) in the field. If the answer to a “No/Yes” question is unknown, record a “9” on the line next to the code for “No” to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered “No”, leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Dredge: A towed steel frame with a cutting bar on the bottom and a steel ring-bag for holding the scallops or mussels. A club stick may be attached to the end of the ring-bag.

Club Stick: A device used to hold the shape of the dredge while it is being towed and to facilitate dumping the dredge on deck. See Figures 1, 2, and 3.

Pressure Plate: An angled piece of steel welded along the length of the top of the dredge frame. It uses the downward pressure created by the dredge

being pulled through the water to keep the dredge on the sea bottom. See Figure 1.

Gear: The combination of dredges fished at any one time.

INSTRUCTIONS

For instructions on completing the Header fields **A**, **B** and **D** refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER(S): Record the consecutive number(s) assigned to each uniquely configured gear hauled.

Example: The first uniquely configured gear is gear number “1”, and consists of a port dredge and a starboard dredge. The characteristics for both the port and starboard dredges are recorded on the Scallop Dredge Gear Characteristics Log. This gear number (“1”) will be used on the Scallop Dredge Haul Log for each haul and will reflect that both the port and starboard dredge are fishing. If at any time, the gear configuration on either the port or starboard dredge changes (i.e. the number of chains are changed, rollers are removed, the twine top is replaced), a new consecutive gear number (“2”) will be assigned. For example, if a tickler chain is removed from the port dredge, a new Scallop Dredge Gear Characteristics Log is required with gear number “2”, recording the new characteristics of the port dredge and the same characteristics from the starboard dredge information from gear number “1”. The “Gear Number” field on all haul logs after the gear change must reflect the new gear number that was assigned.

2. FRAME HEIGHT: Record, in whole inches, the overall height of the dredge frame. Measure this

distance from the bottom of the cutting bar to the top of the pressure plate (if present). See Figure 1.

3. FRAME WIDTH: Record, in whole feet, the dredge frame width. See Figure 1.

4. PRESSURE PLATE USED?: Record whether a forward angled steel plate (see Figure 1) is used on top of the frame by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

CHAINS

5. ROCK CHAINS USED?: Record whether rock chains (see Figure 3) run from behind the bottom of the dredge frame to the chain bag by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

6. NUMBER: Record the number of rock chains used.

7. TICKLER CHAINS USED?: Record whether tickler chains (see Figure 3) run from side to side behind the bottom of the dredge frame by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

8. NUMBER: Record the number of tickler chains used.

TWINE TOP

9. USED?: Record whether the top of the chain bag contains a section of mesh called the twine top (see Figure 2) by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

from the twine top. Use calipers for these measurements. See Appendix P. Vernier Caliper Instructions for further information.

10. MESH SIZE: Record, in whole millimeters, ten randomly selected **inside** mesh measurements

CHAIN BAG

from the twine top. Use calipers for these measurements. See Appendix P. Vernier Caliper Instructions for further information.

11. CHAFFING GEAR USED?: Record whether chaffing gear is used on the bottom of the chain bag by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

12. AVERAGE NUMBER OF LINKS BETWEEN TWO RINGS: Record the **average** number of links used between two rings in the bottom of the chain bag.

13. LINK STOCK SIZE: Record the fractional diameter of the steel used in the links between the rings in the bottom of the chain bag. This information may be found on the container in which the links were purchased, obtained from the captain, or measured with calipers.

Example: 3/8.

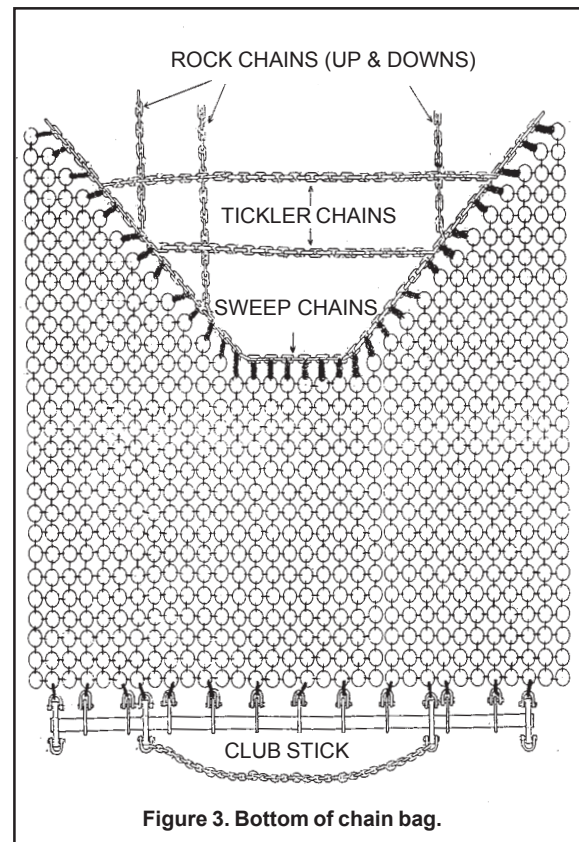
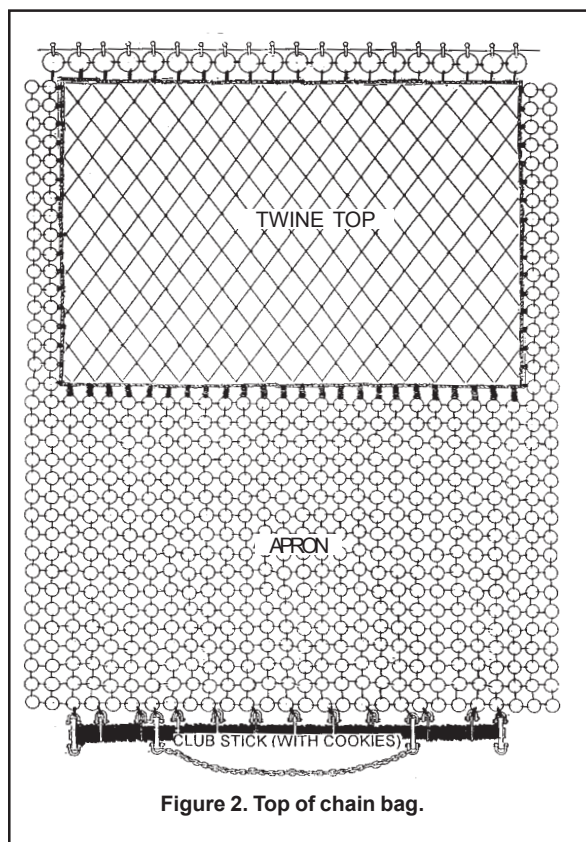
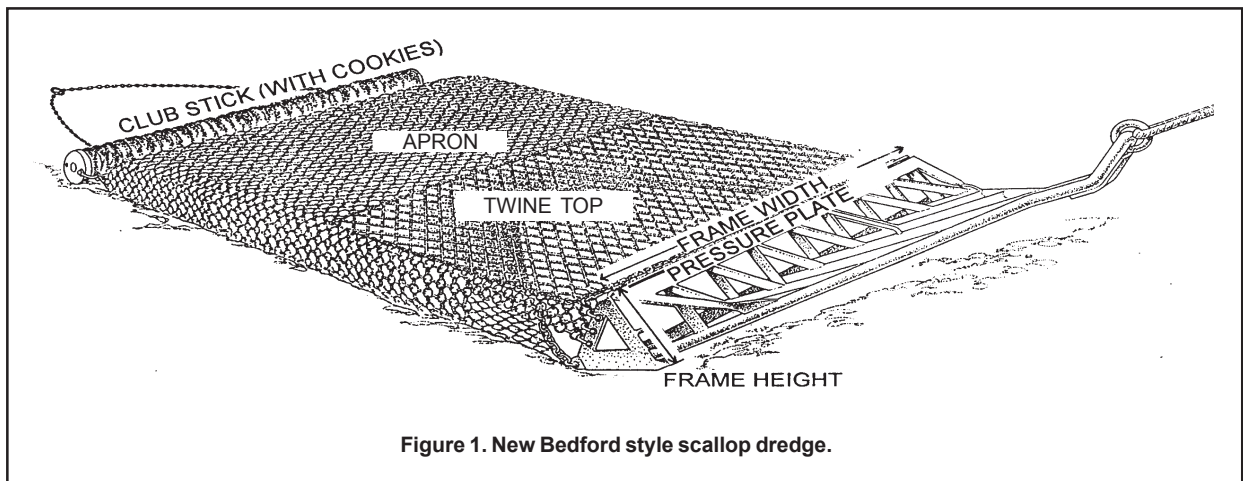
14. INSIDE RING SIZE (TOP OF BAG): Record, in whole millimeters, the inside diameters of ten randomly selected rings from the top (apron; see Figure 2) of the chain bag. Use calipers for these measurements. See Appendix P. Vernier Caliper Instructions for further information.

15. INSIDE RING SIZE (BOTTOM OF BAG): Record, in whole millimeters, the inside diameters of ten randomly selected rings from the bottom of the chain bag. Use calipers for these measurements. See Appendix P. Vernier Caliper Instructions for further information.

16. OUTSIDE RING SIZE: Record, in whole millimeters, the outside diameter of one randomly selected ring from the bottom of the chain bag. Use calipers for this measurement. See Appendix P. Vernier Caliper Instructions for further information.

COMMENTS

Record any additional information about either dredge in the appropriate comment block. If more room is needed, use the back of this log, making sure to write “See Back” on the front of the log. Reference each comment with its corresponding field name.



12/01/03

OBSDG

NMFS FISHERIES OBSERVER PROGRAM

SCALLOP DREDGE GEAR CHARACTERISTICS LOG

PORT DREDGE

| | |
|-------------------|-------------|
| OBS/TRIP ID | A |
| DATE LANDED mm/yy | B / |
| GEAR CODE | GEAR NUMBER |
| D | 1 |

| | | | | | |
|---|--|--|--|---|--|
| DREDGE FRAME FRAME HEIGHT 2 in FRAME WIDTH 3 ft PRESSURE PLATE USED? NO 0 YES 1 4 | | CHAINS 5 USED? NO YES NUMBER ROCK 0 1 6 7 TICKLER 0 1 8 | | TWINE TOP 9 USED? NO 0 YES 1 MESH SIZE mm (10 random inside measurements) 10 | |
| CHAIN BAG CHAFFING GEAR USED? NO 0 YES 1 11 AVG # OF LINKS BTW 2 RINGS 12 LINK STOCK SIZE 13 | | INSIDE RING SIZE mm (10 random measurements) TOP OF BAG 14 BOTTOM OF BAG 15 OUTSIDE RING SIZE 16 | | | |
| PORT DREDGE COMMENTS | | | | | |

STARBOARD DREDGE

| | | | | | |
|---|--|---|--|---|--|
| DREDGE FRAME FRAME HEIGHT in FRAME WIDTH ft PRESSURE PLATE USED? NO 0 YES 1 | | CHAINS USED? NO YES NUMBER ROCK 0 1 TICKLER 0 1 | | TWINE TOP USED? NO 0 YES 1 MESH SIZE mm (10 random measurements) | |
| CHAIN BAG CHAFFING GEAR USED? NO 0 YES 1 AVG # OF LINKS BTW 2 RINGS LINK STOCK SIZE | | INSIDE RING SIZE mm (10 random measurements) TOP OF BAG BOTTOM OF BAG OUTSIDE RING SIZE mm | | | |
| STARBOARD DREDGE COMMENTS | | | | | |

12/01/03

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NMFS FISHERIES OBSERVER PROGRAM

SCALLOP DREDGE GEAR CHARACTERISTICS LOG

PORT DREDGE

| | |
|-------------------|-------------|
| OBS/TRIP ID | E05012- |
| DATE LANDED mm/yy | 03 / 03 |
| GEAR CODE | GEAR NUMBER |
| 132 | 1 |

| | | | | | |
|--|--------------|---|------------|------------------|--|
| DREDGE FRAME | | CHAINS | | TWINE TOP | |
| FRAME HEIGHT | FRAME WIDTH | USED? NO | YES | NUMBER | USED? NO 0 YES 1 X |
| <u>19</u> in | <u>13</u> ft | ROCK 0 | 1 X | <u>4</u> | MESH SIZE mm (10 random inside measurements) |
| PRESSURE PLATE USED? NO 0 YES 1 X | | TICKLER 0 | | 1 X | <u>3</u> |
| CHAIN BAG | | INSIDE RING SIZE mm (10 random measurements) | | | |
| CHAFFING GEAR USED? NO 0 YES 1 X | | TOP OF BAG | | | |
| AVG # OF LINKS BTW 2 RINGS <u>2</u> | | <u>88</u> <u>88</u> <u>89</u> <u>88</u> <u>90</u> <u>89</u> <u>88</u> <u>88</u> <u>90</u> <u>91</u> | | | |
| LINK STOCK SIZE <u>5 / 16</u> | | BOTTOM OF BAG | | | |
| | | <u>87</u> <u>88</u> <u>90</u> <u>89</u> <u>88</u> <u>88</u> <u>90</u> <u>89</u> <u>88</u> <u>91</u> | | | |
| | | OUTSIDE RING SIZE <u>111</u> mm | | | |
| PORT DREDGE COMMENTS | | | | | |

STARBOARD DREDGE

| | | | | | |
|--|--------------|---|------------|------------------|---------------------------------------|
| DREDGE FRAME | | CHAINS | | TWINE TOP | |
| FRAME HEIGHT | FRAME WIDTH | USED? NO | YES | NUMBER | USED? NO 0 YES 1 X |
| <u>19</u> in | <u>13</u> ft | ROCK 0 | 1 X | <u>4</u> | MESH SIZE mm (10 random measurements) |
| PRESSURE PLATE USED? NO 0 YES 1 X | | TICKLER 0 | | 1 X | <u>3</u> |
| CHAIN BAG | | INSIDE RING SIZE mm (10 random measurements) | | | |
| CHAFFING GEAR USED? NO 0 YES 1 X | | TOP OF BAG | | | |
| AVG # OF LINKS BTW 2 RINGS <u>2</u> | | <u>87</u> <u>90</u> <u>88</u> <u>88</u> <u>90</u> <u>87</u> <u>88</u> <u>88</u> <u>88</u> <u>90</u> | | | |
| LINK STOCK SIZE <u>5 / 16</u> | | BOTTOM OF BAG | | | |
| | | <u>91</u> <u>91</u> <u>89</u> <u>88</u> <u>89</u> <u>89</u> <u>90</u> <u>87</u> <u>88</u> <u>89</u> | | | |
| | | OUTSIDE RING SIZE <u>110</u> mm | | | |
| STARBOARD DREDGE COMMENTS | | | | | |
| Starboard Dredge same as port dredge except for twine top and ring size measurements | | | | | |

12/01/03

OBSDG

NMFS FISHERIES OBSERVER PROGRAM**SCALLOP DREDGE GEAR CHARACTERISTICS LOG****PORT DREDGE**

| | |
|---------------------|-------------|
| OBS/TRIP ID | |
| DATE LANDED mm/yy / | |
| GEAR CODE | GEAR NUMBER |
| | |

| | | | | | |
|---|--|--|--|---|--|
| DREDGE FRAME FRAME HEIGHT FRAME WIDTH _____ in _____ ft PRESSURE PLATE USED? NO 0 ____ YES 1 ____ | | CHAINS USED? NO YES NUMBER ROCK 0 ____ 1 ____ TICKLER 0 ____ 1 ____ | | TWINE TOP USED? NO 0 ____ YES 1 ____ MESH SIZE mm (10 random inside measurements) _____ _____ _____ _____ _____ | |
| CHAIN BAG CHAFFING GEAR USED? NO 0 ____ YES 1 ____ AVG # OF LINKS BTW 2 RINGS _____ LINK STOCK SIZE _____ / _____ | | INSIDE RING SIZE mm (10 random measurements) TOP OF BAG _____ BOTTOM OF BAG _____ OUTSIDE RING SIZE _____ mm | | | |
| PORT DREDGE COMMENTS | | | | | |

STARBOARD DREDGE

| | | | | | |
|---|--|--|--|--|--|
| DREDGE FRAME FRAME HEIGHT FRAME WIDTH _____ in _____ ft PRESSURE PLATE USED? NO 0 ____ YES 1 ____ | | CHAINS USED? NO YES NUMBER ROCK 0 ____ 1 ____ TICKLER 0 ____ 1 ____ | | TWINE TOP USED? NO 0 ____ YES 1 ____ MESH SIZE mm (10 random measurements) _____ _____ _____ _____ _____ | |
| CHAIN BAG CHAFFING GEAR USED? NO 0 ____ YES 1 ____ AVG # OF LINKS BTW 2 RINGS _____ LINK STOCK SIZE _____ / _____ | | INSIDE RING SIZE mm (10 random measurements) TOP OF BAG _____ BOTTOM OF BAG _____ OUTSIDE RING SIZE _____ mm | | | |
| STARBOARD DREDGE COMMENTS | | | | | |

SCALLOP DREDGE HAUL LOG

This log contains detailed questions about the setting and hauling of gear, and the haul's catch. Complete a new log after each hauling of gear. If you feel that you cannot go on deck for weather-related safety reasons, record as much information on this log as possible (*i.e.*, Header Information, weather, depths, times, positions, *etc.*). **If the haul is not observed because you are off- watch, complete a Scallop Dredge Off-Watch Haul Log instead of this log.**

The species summary section of this log should be used to record catches of groundfish species, debris and shells only. If any pelagic species (*i.e.*, swordfish, billfish, tuna, bonito, sharks, *etc.*), sturgeons, rays or tagged fish are caught in this haul, an Individual Animal Log must be completed to provide information on each animal. This Scallop Dredge Haul Log will serve as a cover sheet for any Individual Animal Log(s) corresponding to this haul that may follow. Marine mammals, sea turtles, and sea birds must be recorded on a Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

If there are insufficient lines on one form for all species caught in this haul, continue listing species on an additional Scallop Dredge Haul Log, making sure to complete all of the Header Information (A-C) and HAUL NUMBER (E).

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that a field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Haul Begin: First component of dredge(s) deployed, *i.e.*, dredge(s) hit the water.

Haul End: Hauling equipment put into gear.

INSTRUCTIONS

For instructions on completing fields **A - W**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the gear number used for this haul as uniquely identified on the appropriate Scallop Dredge Gear Characteristics Log.

2. GEAR CONDITION : Indicate the condition of the gear at haulback, even if this was the condition of the gear when set, by recording the most appropriate two digit code listed below and in Appendix J. Gear Condition Codes:

- 00 = Unknown.
- 71 = No gear damage or insignificant gear damage.
- 72 = Ring bag broken or missing.
- 73 = Several rings destroyed.
- 74 = Club stick detached.
- 75 = One dredge turned over.
- 76 = Two dredges turned over.
- 77 = Dredges crossed.
- 78 = One dredge lost or totally damaged.
- 79 = Two dredges lost or totally damaged.
- 99 = Other, specify in COMMENTS.

3. BEGIN/END DATE: Record the month, day, and year, based on local time, that this haul began and ended.

4. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000-2359), that this haul began and ended, *i.e.*, when the first component of the dredge(s) is (are) deployed, or the dredge(s) hit the water (Haul Begin), and when the hauling equipment is put into gear (Haul End).

5. DREDGE OBSERVED: Record the dredge(s) from which both kept and discard data was collected for this haul by placing an "X" next to the appropriate code:

- 1 = Port
- 2 = Starboard

3 = Both

NOTE: Both dredges should be observed during on-watch hauls.

NOTE: If only one dredge is observed for weather or safety related reasons, record only the catch data from this dredge in the Species Information section.

6. TOW SPEED: Record, to the nearest tenth of a knot, the average towing speed, over the bottom, for this haul.

7. WIRE OUT: Record, in whole fathoms, the amount of wire paid out for this haul. This measurement is taken from the towing blocks to the dredge. This information may be obtained from the captain.

8. BOTTOM TYPE: Record the predominant bottom type for this haul by placing an "X" next to the appropriate code:

0 = Unknown.

1 = Sand.

2 = Mud.

3 = Gravel.

4 = Rocky.

9 = Other, record the bottom type on line 8A.

NOTE: If the bottom type is not obvious from looking at the dredge, *i.e.*, mud, gravel, *etc.*, this information may be obtained from the captain.

9. BOTTOM CHARACTERIZATION: Record the predominant bottom characterization for this haul by placing and "X" next to the appropriate code:

00 = Unknown.

01 = Clear.

02 = Quahog Shell Covered.

03 = Surf Clam Shell Covered.

04 = Scallop Shell Covered.

05 = Starfish Covered.

06 = Sand Dollar Covered.

08 = Combination, record all bottom characterizations on line 9A.

99 = Other, record the bottom characterization on line 9A.

NOTE: Do not include bottom type (substrate).

10. NUMBER OF BUSHELS KEPT: Record, to the nearest hundredth of a bushel, the amount of scallops, **in the shell**, kept from this haul.

11. NUMBER OF BUSHELS DISCARDED: Record, to the nearest hundredth of a bushel, the amount of scallops, **in the shell**, discarded from this haul.

12. AVERAGE POUND PER BUSHEL KEPT: Record, in whole pounds, the **average** weight per bushel of scallops, in the shell, kept from this haul.

NOTE: This number should reflect the observer's average for several baskets, not the captain's estimate.

13. AVERAGE POUNDS PER BUSHEL DISCARDED: Record, in whole pounds, the **average** weight per bushel of scallops, in the shell, discarded from this haul.

NOTE: This number should reflect the observer's average for several baskets, not the captain's estimate.

14. CLAPPERS OBSERVED?: Record whether **sea scallop** clappers are found in the gear from this haul by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

NOTE: Include pounds of clappers in the species of the Haul Log.

15. WATER TEMPERATURE: Record, to the nearest tenth of a degree Fahrenheit, the surface sea water temperature when the gear has been set and the winches are locked. The temperature must be recorded for every on-watch observed haul during the entire trip.

NOTE: Use a "ScoopMaster" thermometer to obtain this temperature.

NOTE: If an incidental take occurs in this haul, a WATER TEMPERATURE **must** be recorded.

COMMENTS: Record any additional information regarding this haul, *i.e.*, unusual species caught, unique gear arrangements or fishing operations, *etc.* If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

12/01/03

OBSDH, OBHAU, OBSPP

NMFS FISHERIES OBSERVER PROGRAM
SCALLOP DREDGE HAUL LOG

| | |
|-------------------|-------------|
| OBS/TRIP ID | A |
| DATE LANDED mm/yy | B / |
| PAGE # | C of |

| GEAR CODE D | GEAR NUMBER 1 | HAUL # E | HAUL OBS ? F NO 0 ___ YES 1 ___ | CATCH ? G NO 0 ___ YES 1 ___ | INC TAKE ? H NO 0 ___ YES 1 ___ | WEATHER CODE I | WIND SPEED J kn DIRECTION K ° | | WAVE HEIGHT L ft | DEPTH, HAUL BEGIN M fm | GEAR COND CODE 2 | | |
|-----------------------|-------------------------|--------------------|---|--|---|-----------------------------|---|------|--|-------------------------------------|--|--------|-----|
| HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | | | DREDGE OBSERVED 5 | TOW SPEED 6 kn | WIRE OUT 7 fm | | |
| BEGIN | 3 / / | 4 : | STATION 1 | | LATITUDE / Bearing N | | STATION 2 | | LONGITUDE / Bearing | | | | |
| END | / / | : | | | | | | | | | | | |
| COMMENTS | | | | | | | WATER TEMP 15 ° F | | BOTTOM TYPE 8 Unknown 0 ___ Sand 1 ___ Mud 2 ___ Gravel 3 ___ Rocky 4 ___ Other 9 ___ 8A | | BOTTOM CHARACTERIZATION Unknown 00 ___ Clear 01 ___ Quahog Shell Covered 02 ___ Surf Clam Shell Covered 03 ___ Scallop Shell Covered 04 ___ Starfish Covered 05 ___ Sand Dollar Covered 06 ___ Combination 08 ___ Other 09 ___ 9A | | |
| | | | | | | | KEPT 10 | | DISCARDED 11 | | CLAPPERS OBS? NO 0 ___ 14 YES 1 ___ | | |
| | | | | | | | # OF BUSHELS . | | . | | | | |
| | | | | | | | AVG LB / BUSHEL 12 | | 13 | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
| Q | R | S | T | U | V | W | | | | | | | |
| | | | | | | | | | | | | | |
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12/01/03

OBSDH, OBHAU, OBSPP

NMFS FISHERIES OBSERVER PROGRAM

SCALLOP DREDGE HAUL LOG

| | |
|-------------------|---------|
| OBS/TRIP ID | E05012- |
| DATE LANDED mm/yy | 03 / 01 |
| PAGE # | 1 of 2 |

| | | | | | | | | | | | | | | |
|--|-------------------------|----------------------|--|---|--|---------------------------|---|-----------|--|-----------------------------------|---|-------------------------|--|--|
| GEAR CODE 132 | GEAR NUMBER 1 | HAUL # 135 | HAUL OBS ? NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | CATCH ? NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | INC TAKE ? NO 0 <input checked="" type="checkbox"/> YES 1 <input type="checkbox"/> | WEATHER CODE 04 | WIND SPEED 5 kn DIRECTION 0 ° | | WAVE HEIGHT 3 ft | DEPTH, HAUL BEGIN 35 fm | GEAR COND CODE 71 | | | |
| HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | DREDGE OBSERVED | TOW SPEED | WIRE OUT | | | | | |
| BEGIN | 03 / 12 / 01 | 05 : 00 | STATION 1 | LATITUDE / Bearing | | STATION 2 | LONGITUDE / Bearing | | Port 1 <input type="checkbox"/> Starboard 2 <input type="checkbox"/> Both 3 <input checked="" type="checkbox"/> | 3.5 kn | 100 fm | | | |
| END | 03 / 12 / 01 | 05 : 55 | | 41 07.3 | | | 69 22.8 | | TARGET SPECIES CODE SEA SCALLOPS 8009 | | | | | |
| COMMENTS Captain was towing in circles. There was about 200 lbs of clappers. | | | | | | | WATER TEMP 58.0 ° F | | BOTTOM TYPE | | | BOTTOM CHARACTERIZATION | | |
| | | | | | | | Unknown 0 <input type="checkbox"/> Sand 1 <input type="checkbox"/> Mud 2 <input type="checkbox"/> Gravel 3 <input type="checkbox"/> Rocky 4 <input checked="" type="checkbox"/> Other 9 <input type="checkbox"/> | | Unknown 00 <input type="checkbox"/> Clear 01 <input type="checkbox"/> Quahog Shell Covered 02 <input type="checkbox"/> Surf Clam Shell Covered 03 <input type="checkbox"/> Scallop Shell Covered 04 <input type="checkbox"/> Starfish Covered 05 <input checked="" type="checkbox"/> Sand Dollar Covered 06 <input type="checkbox"/> | | | | | |
| | | | | | | | KEPT # OF BUSHELS 8.25 AVG LB / BUSHEL 69 | | DISCARDED | | CLAPPERS OBS? NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | | Combination 08 <input type="checkbox"/> Other 09 <input type="checkbox"/> | |
| | | | | | | | | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E | |
| Scallops, Sea | 8009 | K | 569 | 100 | R | E | Little Skate | | D | 50 | 001 | R | E | |
| Monkfish, (tail) | | K | 29 | 100 | D | A | | | | | | | | |
| Monkfish | | D | 18 | 012 | R | A | | | | | | | | |
| Yellowtail Flounder | | K | 6 | 100 | R | A | | | | | | | | |
| Shells NK | | D | 200 | 054 | R | E | | | | | | | | |
| Starfish, Seastar NK | | D | 150 | 001 | R | E | | | | | | | | |
| Rocks - Debris | | D | 1000 | 053 | R | E | | | | | | | | |
| Jonah Crab | | D | 15 | 001 | R | E | | | | | | | | |

OBSDH, OBHAU, OBSPP

| | |
|-------------------|----|
| OBS/TRIP ID | |
| DATE LANDED mm/yy | / |
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SCALLOP DREDGE OFF-WATCH HAUL LOG

This log is to be used for recording dates, times, locations and the amount of kept sea scallops for **off-watch** hauls on scallop dredge trips. Complete a new log for each group of hauls which occur during an off-watch period.

If the observer is aware of an incidental take of a marine mammal, sea turtle, or sea bird during an off-watch period, complete as many fields as possible on a Scallop Dredge Haul Log in addition to completing an Incidental Take Log.

Become familiar with the following definitions.

NOTE: Kept is defined as brought on board the vessel and retained for market or consumptive purposes.

DEFINITIONS

Haul Begin: First component of dredge(s) deployed, *i.e.*, dredge(s) hit the water.

Haul End: Hauling equipment put into gear.

INSTRUCTIONS

For instructions on completing fields **A, B, C** and **N**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. HAUL NUMBER: Record the haul number each time gear is hauled during this off-watch period, maintaining sequential haul numbering for all hauls (observed, unobserved and off-watch) throughout the trip.

2. BEGIN/END DATE: Record the month, day, and year, based on local time, that this haul began and ended.

3. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000-2359), that this haul began and ended, *i.e.*, when the first component of the dredge(s) is (are) deployed or the dredge(s) hit the water (Haul Begin) and when the hauling equipment is put into gear (Haul End).

4. NUMBER OF BUSHEL KEPT: Record, to the nearest hundredth of a bushel, the captain's or mate's estimated number of bushels of sea scallops, in the shell, kept from **both dredges** for this haul.

**NMFS FISHERIES OBSERVER PROGRAM
SCALLOP DREDGE OFF-WATCH HAUL LOG**

| | |
|-------------------|-------------|
| OBS/TRIP ID | A |
| DATE LANDED mm/yy | B / |
| PAGE # | C of |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|----------|-----------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| 1 | BEGIN | 2 / / | 3 : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | 4 . |
| | | | | | N | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |
| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
| | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | | | | | |
| | END | / / | : | | | | | |

**NMFS FISHERIES OBSERVER PROGRAM
SCALLOP DREDGE OFF-WATCH HAUL LOG**

| | |
|-------------------|---------|
| OBS/TRIP ID | E05012- |
| DATE LANDED mm/yy | 03 / 01 |
| PAGE # | 3 of 10 |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHELS KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|--------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| 30 | BEGIN | 03/ 06 / 01 | 23 : 55 | | 41 07.2 | | 69 22.8 | 8 . 50 |
| | END | 03/ 07 / 01 | 00 : 55 | | 41 08.3 | | 69 25.6 | |
| | | | | | | | | |
| 31 | BEGIN | 03/ 07 / 01 | 01 : 00 | | 41 08.3 | | 69 25.6 | 9 . 00 |
| | END | 03/ 07 / 01 | 01 : 55 | | 41 07.4 | | 69 22.3 | |
| | | | | | | | | |
| 32 | BEGIN | 03/ 07 / 01 | 02 : 00 | | 41 07.4 | | 69 22.3 | 7 . 75 |
| | END | 03/ 07 / 01 | 02 : 55 | | 41 07.9 | | 69 24.9 | |
| | | | | | | | | |
| 33 | BEGIN | 03/ 07 / 01 | 03 : 00 | | 41 07.9 | | 69 24.9 | 9 . 50 |
| | END | 03/ 07 / 01 | 03 : 55 | | 41 06.9 | | 69 21.5 | |
| | | | | | | | | |
| 34 | BEGIN | 03/ 07 / 01 | 04 : 00 | | 41 06.9 | | 69 21.5 | 12 . 25 |
| | END | 03/ 07 / 01 | 04 : 55 | | 41 07.6 | | 69 23.4 | |
| | | | | | | | | |
| 35 | BEGIN | 03/ 07 / 01 | 05 : 00 | | 41 07.6 | | 69 23.4 | 10 . 25 |
| | END | 03/ 07 / 01 | 05 : 55 | | 41 07.2 | | 69 22.8 | |
| | | | | | | | | |
| | BEGIN | / / | : | | | | | . |
| | END | / / | : | | | | | |
| | | | | | | | | |
| | BEGIN | / / | : | | | | | . |
| | END | / / | : | | | | | |
| | | | | | | | | |
| | BEGIN | / / | : | | | | | . |
| | END | / / | : | | | | | |
| | | | | | | | | |

**NMFS FISHERIES OBSERVER PROGRAM
SCALLOP DREDGE OFF-WATCH HAUL LOG**

| | |
|-------------------|----|
| OBS/TRIP ID | |
| DATE LANDED mm/yy | / |
| PAGE # | of |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | BEGIN | | | | |
| | | / / | : | 9960- | | 9960- | | |
| | END | / / | : | 9960- | | 9960- | | . |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | BEGIN | | | | |
| | | / / | : | 9960- | | 9960- | | |
| | END | / / | : | 9960- | | 9960- | | . |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | BEGIN | | | | |
| | | / / | : | 9960- | | 9960- | | |
| | END | / / | : | 9960- | | 9960- | | . |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | BEGIN | | | | |
| | | / / | : | 9960- | | 9960- | | |
| | END | / / | : | 9960- | | 9960- | | . |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | BEGIN | | | | |
| | | / / | : | 9960- | | 9960- | | |
| | END | / / | : | 9960- | | 9960- | | . |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | BEGIN | | | | |
| | | / / | : | 9960- | | 9960- | | |
| | END | / / | : | 9960- | | 9960- | | . |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | BEGIN | | | | |
| | | / / | : | 9960- | | 9960- | | |
| | END | / / | : | 9960- | | 9960- | | . |

| HAUL # | HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | SEA SCALLOPS # OF BUSHEL KEPT |
|--------|--------------|------------------|------------------|--|--------------------|-----------|---------------------|-------------------------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | |
| | | | | BEGIN | | | | |
| | | / / | : | 9960- | | 9960- | | |
| | END | / / | : | 9960- | | 9960- | | . |

LOBSTER, CRAB, and FISH POT GEAR CHARACTERISTICS LOG

This log contains detailed questions about the gear fished. Complete a new log for each uniquely configured gear (as defined below) **hailed** during a trip. These unique configurations may be based on variables such as number of pots, baiting method, etc. Number each gear configuration sequentially. Any changes in these fields require the completion of a new Lobster, Crab, and Fish Pot Gear Characteristics Log.

If a gear is set out and hauled more than once during a trip do not complete a new Lobster, Crab, and Fish Pot Gear Characteristics Log for the multiple hauls. Rather, record on the Lobster, Crab, and Fish Pot Haul Log which gear number is being hauled. In addition, record any other information necessary to understand the manner in which the gear was set/hailed in COMMENTS.

If the vessel has two or more identical gears which are hauled separately, complete only one Lobster, Crab, and Fish Pot Gear Characteristics Log and record the consecutively assigned numbers of all identical gears described in GEAR NUMBER(S) (#1). See the lobster, crab, and fish pot definitions below and GEAR NUMBER(S) (#1) for more information on defining and numbering gears.

If information is unavailable or unknown to any question except a “No/Yes” question, record a dash (-) in the field. If the answer to a “No/Yes” question is unknown, record a “9” on the line next to the code for “No” to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered “No”, leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Lobster, Crab, or Fish Pot Trawl: A series of traps attached to a mainline (“the trawl or string”). Each trap contains a ballast to ensure minimal movement on the ocean floor. The traps are baited, and configured to allow entry, but no exit, of the targeted species.

Kitchen: Section of the trap where the bait is located.

Parlor: Section of the trap from which animals are

removed by the fisherman.

Collar: A non-return device in the shape of a funnel whose tapered end is directed away from the opening and into the catch/bait chamber. This device is common in crab, eel, and fish pots and is also called “the throat”.

Gear: An individual lobster, crab, or fish pot trawl.

INSTRUCTIONS

For instructions on completing Header Fields **A**, **B** and **D** refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER(S): Record the consecutive number(s) assigned to each uniquely configured gear hauled and for which characteristics are described. See the definition of gear in the introduction.

NOTE: If two or more identical gears are used, assign consecutive numbers to each gear and record all of these numbers on one Lobster, Crab, and Fish Pot Gear Characteristics Log.

Example: The first uniquely configured gear is “1”, and its characteristics will be recorded on one Lobster, Crab, and Fish Pot Gear Characteristics Log. The next two **identical** gears are “2, 3”, and their identical characteristics will be recorded on a second Lobster, Crab, and Fish Pot Gear Characteristics Log.

NOTE: Gears should be numbered consecutively according to the order in which they are hauled aboard the vessel to which you are deployed.

Example: First gear hauled is “1”, next gear hauled is “2”, etc.

2. NUMBER OF POTS: Record the **total** number of individual pots used in this gear.

POT CHARACTERISTICS

NOTE: If a trawl includes more than one type of pot, complete a Lobster, Crab, and Fish Pot Gear Characteristics Log for the pot type that makes up the majority (>50%) of the trawl, and record the number of the pots of each different side construction in COMMENTS.

3. SHAPE: Record the shape of the pots used on this gear by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Rectangular.
- 02 = Round/Oval.
- 03 = 1/2 Round, record only the BOTTOM LENGTH (#7), BOTTOM WIDTH (#8) and HEIGHT (#9).
- 04 = Cone.
- 05 = Trapezoid.
- 99 = Other, record the pot shape on line 3A.

4. SIDE CONSTRUCTION: Record the type of material used in the construction of the sides of the pot, by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Wood Lathe.
- 2 = Plastic Coated Wire.
- 3 = Twine Mesh.
- 4 = Plastic Mesh.
- 8 = Combination, record the side construction materials on line 4A.
- 9 = Other, record the side construction material on line 4A.

5. TOP LENGTH: Record, in whole inches, the length of the top of the pots used on this gear.

6. TOPWIDTH: Record, in whole inches, the width of the top of the pots used on this gear.

7. BOTTOM LENGTH: Record, in whole inches, the length of the bottom of the pots used on this gear.

8. BOTTOM WIDTH: Record, in whole inches, the width of the bottom of the pots used on this gear.

9. HEIGHT: Record, in whole inches, the height of the pots used on this gear.

10. DISTANCE BETWEEN POTS: Record, in whole feet, the **average** distance between the pots used on this gear.

ENTRANCE

11. NUMBER: Record the number of entrances used in the pots on this gear.

12. RING SIZE: Record, to the nearest tenth of an inch, the inside ring diameter from the entrance(s) used in the pots on this gear. Use calipers for this measurement. If no ring is used, record a dash (-). See Appendix P. Vernier Caliper Instructions for further information.

13. LOCATION: Record the location of the entrance(s) used in the pots on this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Top.
- 2 = Side.
- 3 = End.
- 8 = Combination, record all entrance locations on line 13A.
- 9 = Other, record the entrance location on line 13A.

ESCAPE VENT

14. USED?: Record whether any escape vent(s) is (are) used in the pots on this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

15. NUMBER: Record the number of escape vent(s) used in the pots on this gear.

16. LENGTH: Record, to the nearest tenth of an inch, the length of the escape vent(s) used in the pots on this gear. Use calipers to obtain this measurement. See Appendix P. Vernier Caliper Instructions for further information.

17. HEIGHT: Record, to the nearest tenth of an inch, the height of the escape vent(s) used in the pots on this gear. Use calipers to obtain this measurement. See Appendix P. Vernier Caliper Instructions for further information.

18. SHAPE: Record the shape of the escape vent(s) used in the pots on this gear by placing an “X” next to the appropriate code:

- 00 = Unknown.
- 01 = Rectangular.
- 02 = Round/Oval.
- 99 = Other, record the escape vent shape on line 18A.

19. LOCATION: Record the location of escape vent(s) used in the pots on this gear, by placing an “X” next to the appropriate code:

- 0 = Unknown.
- 1 = Top.
- 2 = Side.
- 3 = End.
- 8 = Combination, record all escape vent locations on line 19A.
- 9 = Other, record the escape vent location on line 19A.

BIODEGRADABLE PANEL

20. USED?: Record whether a biodegradable panel is used in the pots on this gear by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

21. ATTACHMENT TYPE: Record the material used to attach the biodegradable panel to the pots on this gear, by placing an “X” next to the appropriate code:

- 0 = Unknown.
- 1 = Iron Hogrings.
- 2 = Degradable Plastic.
- 3 = Softwood Lathe.
- 4 = Uncoated Wire.
- 9 = Other, record the attachment type on line 21A.

BAIT

22. METHOD: Record the method used to bait the pots on this gear by placing an “X” next to the appropriate code:

- 0 = Unknown.
- 1 = String.

2 = Bait Bag.

9 = Other, record the baiting method on line 22A.

COMMENTS

Record any additional information about this gear. If more room is needed, use the back of this log, making sure to write “See Back” on the front of the log. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM

LOBSTER, CRAB, & FISH POT GEAR CHARACTERISTICS LOG

| | |
|-----------------|------------|
| OBS/TRIP ID | A |
| DATE LAND mm/yy | B / |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------------|--|-----------|------------------|----------------|-----------|-------------------|--------------|----------------|-----------------|--------------------|--------------|-----------|----------------|--------------|---------------|--------|---------------|---------|-----------------|---------------|--------------|---------------|---|-----------|------------------|---------------------------|-----------------|-----------------|----------------------|------------------|-----------------|---------|----------|---------------|---------|--|--|---------|-----------------------|--|--|------------------|----------------------------|--|---------|--------------------|--|-----------|--|-------|--|--------|--|-------|--|---------------|--|---------|------------|
| GEAR CODE D | GEAR NUMBERS(S) 1 | NUMBER OF POTS 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POT CHARACTERISTICS <table> <tr> <td>3</td> <td>4</td> <td></td> <td></td> </tr> <tr> <td>SHAPE</td> <td>SIDE CONSTRUCTION</td> <td>LENGTH in</td> <td>WIDTH in</td> </tr> <tr> <td>Unknown 00</td> <td>Unknown 0</td> <td>Top 5</td> <td>6</td> </tr> <tr> <td>Rectangular 01</td> <td>Wood Lathe 1</td> <td></td> <td></td> </tr> <tr> <td>Round/Oval 02</td> <td>Plastic</td> <td>Bottom 7</td> <td>8</td> </tr> <tr> <td>1/2 Round 03</td> <td>Coated Wire 2</td> <td></td> <td></td> </tr> <tr> <td>Cone 04</td> <td>Twine Mesh 3</td> <td>HEIGHT 9</td> <td>in</td> </tr> <tr> <td>Trapezoid 05</td> <td>Plastic Mesh 4</td> <td></td> <td></td> </tr> <tr> <td>Other 99</td> <td>Combination 8</td> <td>AVERAGE</td> <td></td> </tr> <tr> <td></td> <td>Other 9</td> <td>DISTANCE BETWEEN POTS</td> <td></td> </tr> </table> | | 3 | 4 | | | SHAPE | SIDE CONSTRUCTION | LENGTH in | WIDTH in | Unknown 00 | Unknown 0 | Top 5 | 6 | Rectangular 01 | Wood Lathe 1 | | | Round/Oval 02 | Plastic | Bottom 7 | 8 | 1/2 Round 03 | Coated Wire 2 | | | Cone 04 | Twine Mesh 3 | HEIGHT 9 | in | Trapezoid 05 | Plastic Mesh 4 | | | Other 99 | Combination 8 | AVERAGE | | | Other 9 | DISTANCE BETWEEN POTS | | ENTRANCE <table> <tr> <td>NUMBER 11</td> <td>INSIDE RING SIZE 12</td> </tr> <tr> <td></td> <td>_____in</td> </tr> <tr> <td colspan="2">LOCATION 13</td> </tr> <tr> <td>Unknown 0</td> <td></td> </tr> <tr> <td>Top 1</td> <td></td> </tr> <tr> <td>Side 2</td> <td></td> </tr> <tr> <td>End 3</td> <td></td> </tr> <tr> <td>Combination 8</td> <td></td> </tr> <tr> <td>Other 9</td> <td>13A</td> </tr> </table> | NUMBER 11 | INSIDE RING SIZE 12 | | _____in | LOCATION 13 | | Unknown 0 | | Top 1 | | Side 2 | | End 3 | | Combination 8 | | Other 9 | 13A |
| 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHAPE | SIDE CONSTRUCTION | LENGTH in | WIDTH in | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unknown 00 | Unknown 0 | Top 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rectangular 01 | Wood Lathe 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Round/Oval 02 | Plastic | Bottom 7 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/2 Round 03 | Coated Wire 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cone 04 | Twine Mesh 3 | HEIGHT 9 | in | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trapezoid 05 | Plastic Mesh 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 99 | Combination 8 | AVERAGE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 9 | DISTANCE BETWEEN POTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NUMBER 11 | INSIDE RING SIZE 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | _____in | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unknown 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Top 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Side 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| End 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Combination 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 9 | 13A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ESCAPE VENT <table> <tr> <td>14</td> <td>16</td> </tr> <tr> <td>USED? NO 0 YES 1</td> <td>LENGTH _____in</td> </tr> <tr> <td>15</td> <td>17</td> </tr> <tr> <td>NUMBER _____</td> <td>HEIGHT _____in</td> </tr> <tr> <td>SHAPE 18</td> <td>LOCATION 19</td> </tr> <tr> <td>Unknown 00</td> <td>Unknown 0</td> </tr> <tr> <td>Rectangular 01</td> <td>Top 1</td> </tr> <tr> <td>Round/Oval 02</td> <td>Side 2</td> </tr> <tr> <td>Other 99</td> <td>End 3</td> </tr> <tr> <td></td> <td>Combination 8</td> </tr> <tr> <td></td> <td>Other 9</td> </tr> </table> | | 14 | 16 | USED? NO 0 YES 1 | LENGTH _____in | 15 | 17 | NUMBER _____ | HEIGHT _____in | SHAPE 18 | LOCATION 19 | Unknown 00 | Unknown 0 | Rectangular 01 | Top 1 | Round/Oval 02 | Side 2 | Other 99 | End 3 | | Combination 8 | | Other 9 | BIODEGRADABLE PANEL <table> <tr> <td>20</td> </tr> <tr> <td>USED? NO 0 YES 1</td> </tr> <tr> <td>ATTACHMENT TYPE 21</td> </tr> <tr> <td>Unknown 0</td> </tr> <tr> <td>Iron Hogrings 1</td> </tr> <tr> <td>Degradable Plastic 2</td> </tr> <tr> <td>Softwood Lathe 3</td> </tr> <tr> <td>Uncoated Wire 4</td> </tr> <tr> <td>Other 9</td> </tr> </table> | 20 | USED? NO 0 YES 1 | ATTACHMENT TYPE 21 | Unknown 0 | Iron Hogrings 1 | Degradable Plastic 2 | Softwood Lathe 3 | Uncoated Wire 4 | Other 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| USED? NO 0 YES 1 | LENGTH _____in | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NUMBER _____ | HEIGHT _____in | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHAPE 18 | LOCATION 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unknown 00 | Unknown 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rectangular 01 | Top 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Round/Oval 02 | Side 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 99 | End 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Combination 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| USED? NO 0 YES 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ATTACHMENT TYPE 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unknown 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Iron Hogrings 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degradable Plastic 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Softwood Lathe 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uncoated Wire 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMMENTS | | BAIT <table> <tr> <td>22</td> </tr> <tr> <td>METHOD</td> </tr> <tr> <td>Unknown 0</td> </tr> <tr> <td>String 1</td> </tr> <tr> <td>Bait Bag 2</td> </tr> <tr> <td>Other 9</td> </tr> </table> | 22 | METHOD | Unknown 0 | String 1 | Bait Bag 2 | Other 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| METHOD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unknown 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| String 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bait Bag 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RECTANGULAR LOBSTER TRAP WIRE CONSTRUCTION | | 21A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| GEAR CODE | GEAR NUMBERS(S) | NUMBER OF POTS |
|-----------|-----------------|----------------|
| | | |

| POT CHARACTERISTICS | | | | | | ENTRANCE | |
|---------------------|---------|-------------------|--------|-----------------------|----------|-------------|------------------|
| SHAPE | | SIDE CONSTRUCTION | | LENGTH in | WIDTH in | NUMBER | INSIDE RING SIZE |
| Unknown | 00 ____ | Unknown | 0 ____ | Top | _____ | _____ | _____. ____ in |
| Rectangular | 01 ____ | Wood Lathe | 1 ____ | | | | |
| Round/Oval | 02 ____ | Plastic | | Bottom | _____ | | |
| 1/2 Round | 03 ____ | Coated Wire | 2 ____ | | | LOCATION | |
| Cone | 04 ____ | Twine Mesh | 3 ____ | HEIGHT | _____ in | Unknown | 0 ____ |
| Trapezoid | 05 ____ | Plastic Mesh | 4 ____ | | | Top | 1 ____ |
| Other | 99 ____ | Combination | 8 ____ | AVERAGE | | Side | 2 ____ |
| | | Other | 9 ____ | DISTANCE BETWEEN POTS | | End | 3 ____ |
| | | | | | | Combination | 8 ____ |
| | | | | | | Other | 9 ____ |
| | | | | | | | _____ |
| | | | | | | | |

| ESCAPE VENT | | BIODEGRADABLE PANEL | | BAIT | |
|---------------------|------------|----------------------|---------------------------|------------|-----------------|
| USED? NO 0 ____ | YES 1 ____ | LENGTH _____. ____in | USED? NO 0 ____ | YES 1 ____ | METHOD |
| NUMBER | _____ | HEIGHT _____. ____in | ATTACHMENT TYPE | | Unknown 0 ____ |
| SHAPE | | LOCATION | Unknown 0 ____ | | String 1 ____ |
| Unknown 00 ____ | | Unknown 0 ____ | Iron Hogrings 1 ____ | | Bait Bag 2 ____ |
| Rectangular 01 ____ | | Top 1 ____ | Degradable Plastic 2 ____ | | Other 9 ____ |
| Round/Oval 02 ____ | | Side 2 ____ | Softwood Lathe 3 ____ | | _____ |
| Other 99 ____ | | End 3 ____ | Uncoated Wire 4 ____ | | |
| | | Combination 8 ____ | Other 9 ____ | | |
| | | Other 9 ____ | _____ | | |
| _____ | | _____ | | | |

Diagram illustrating the construction of a Rectangular Lobster Trap, showing the wire mesh structure and labeled components:

- Parlor
- Bait Bag
- Kitchen
- Top Length
- Top Width
- Height
- Bottom Width
- Bottom Length
- Escape Vent
- Biodegradable Panel

LOBSTER, CRAB, and FISH POT HAUL LOG

This log contains detailed questions about the setting and hauling of gear, and the haul's catch. Complete a new log after each hauling of gear. If you feel that you cannot go on deck for weather related safety reasons, record as much information on this log as possible (*i.e.* Header Information, weather, depths, times, positions, *etc.*).

If the gear is set, and only partially hauled, complete a Lobster, Crab, and Fish Pot Haul Log with the Species Information section completed as fully as possible, and "Haul Aborted" recorded following the last species record. An aborted haul should be recorded as observed, whenever it fits the definition of an observed haul (F).

If any pelagic species (*i.e.* swordfish, billfish, tuna, bonito, sharks, *etc.*), sturgeons, rays or tagged fish are caught in this haul, an Individual Animal Log must be completed to provide information on each animal caught by the gear. This Lobster, Crab and Fish Pot Haul Log will serve as a cover sheet for any Individual Animal Log(s) corresponding to this haul that may follow. All marine mammals, sea turtles, and sea birds must be recorded on a Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

If there are insufficient lines on one form for all species caught in this haul, continue listing species on an additional Lobster, Crab, and Fish Pot Haul Log, making sure to complete all of the Header Information (A-C) and HAUL NUMBER (E).

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that a field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Set Begin: First component of lobster, crab, or fish

pot gear deployed, *i.e.* high flyer and/or anchor hits the water.

Set End: Trawl secured to anchoring device, *i.e.* trawl completely deployed.

Haul Begin: Hauling equipment put into gear.

Haul End: Lobster, crab, and fish pot gear completely retrieved and aboard vessel.

NOTE: Lobster, crab, and fish pots are usually set in trawls. A trawl consists of a mainline to which multiple pots are attached.

INSTRUCTIONS

For instructions on completing fields **A-W**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the gear number used for this haul as uniquely identified on the appropriate Lobster, Crab, and Fish Pot Gear Characteristics Log.

2. GEAR CONDITION: Indicate the condition of the gear at haulback, even if this was the condition of the gear when set, by recording the most appropriate two digit code listed below, and in Appendix J. Gear Condition Codes:

- 00 = Unknown.
- 41 = No gear damage.
- 42 = Less than 25% of the pots have enough damage to allow the target species to be released. This damage includes loss of the escape panel.
- 43 = Between 25% and 50% of the pots have enough damage to allow the target species to be released.
- 44 = Greater than 50% of the pots have enough damage to allow the target species to be released.
- 45 = Less than 25% of the pots are unfishable.
- 46 = Between 25% and 50% of the pots are unfishable.
- 47 = Greater than 50% of the pots are

unfishable.

99 = Other, specify in COMMENTS.

SET/HAUL INFORMATION

Set Information for the next 3 fields (#'s 3, 4, 5): If set is witnessed, record Set BEGIN/ END DATES and BEGIN/ END TIMES but **not** SOAK DURATION. If set is not witnessed, fill in SOAK DURATION only.

3. BEGIN/END DATE: Record the month, day, and year, based on local time, that this set began and ended. If the setting of the gear is not witnessed do not complete this field, instead, complete SOAK DURATION (#5). Record the month, day, and year, based on local time, that this haul began and ended.

4. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000-2359), that this set began and ended, *i.e.* when the first component of the lobster, crab, or fish pot gear is deployed, or the high flyer and/or anchor hits the water (Set Begin), and when the trawl is secured to the anchoring device, or completely deployed (Set End). **If the setting of the gear is not witnessed do not complete this field, instead, complete SOAK DURATION (#5) and record the estimated set times in COMMENTS.** Record the local time, using the 24 hour clock (0000-2359), that this haul began and ended, *i.e.* when the hauling equipment is put into gear (Haul Begin), and when the lobster, crab, or fish pot gear is completely retrieved and aboard the vessel (Haul End).

5. SOAK DURATION: Record, to the nearest tenth of an hour, the amount of time that the gear for this haul is in the water fishing. This is the amount of time from when the trawl is secured to an anchoring device, *i.e.* when the gear is completely deployed (Set End), until the hauling equipment is put into gear (Haul Begin). Obtain this time from the captain. **If the setting of the gear is witnessed do not complete this field, instead, complete SET BEGIN AND END DATES AND TIMES (#'s 3 and 4).**

NOTE: If estimated set times from the captain are used to calculate SOAK DURATION record them in COMMENTS.

6. HAUL END WATER TEMPERATURE:

Record, to the nearest tenth of a degree Fahrenheit, the surface water temperature when this haul ended.

NOTE: Use a "ScoopMaster" thermometer to obtain these temperatures.

NOTE: If these temperatures are obtained in Celsius, use Appendix Q. Conversion Tables to convert them to Fahrenheit.

NUMBER OF POTS

7. SET: Record the **total** number of pots that are/were used for this set. This number should agree with the number recorded in NUMBER OF POTS on the corresponding Lobster, Crab and Fish Pot Gear Characteristics Log(s).

8. HAULED: Record the **total** number of pots that are hauled back from this set.

9. LOST: Record the **total** number of pots that are lost from this set. If this number differs from NUMBER OF POTS SET (#7) minus NUMBER OF POTS HAULED (#8), then record the reason(s) in COMMENTS.

BAIT

10. POUNDS: Record, in whole pounds, the amount of bait used for this haul, for up to two major baits. This information may be obtained from the captain.

11. KIND: Indicate the kind of bait used for this haul, for up to two major baits, by recording the most appropriate two digit code listed below, and in Appendix O. Bait Codes:

00 = Unknown.
01 = Mackerel.
02 = Herring.
03 = Squid.
05 = Redfish.
08 = Skate.
09 = Clams.
99 = Other, record the bait kind in COMMENTS.

12. TYPE: Indicate the type of bait used for this haul, for up to two major baits, by recording the most appro-

priate one digit code listed below, and in Appendix O.

Bait Codes:

- 0 = Unknown.
- 1 = Whole.
- 2 = Cut.
- 3 = Live.
- 9 = Other, record the bait type in COMMENTS.

Example: Fish racks, frames or bellies are “Cut” (2), record cut type in COMMENTS.

13. CONDITION: Indicate the condition of the bait used for this haul, for up to two major baits, by recording the most appropriate one digit code listed below, and in Appendix O. Bait Codes:

- 0 = Unknown.
- 1 = Previously Frozen.
- 2 = Fresh.
- 3 = Salted.
- 6 = Frozen.
- 7 = Semi-frozen.
- 8 = Combination, record all bait conditions in COMMENTS.
- 9 = Other, record the bait condition in COMMENTS.

Example: Frozen and salted bait is “Combination” (8).

14. SET METHOD: Record the method that best describes the manner in which the gear for this haul was set by placing an “X” next to the appropriate code:

- 00 = Unknown.
- 01 = Temperature.
- 02 = Bottom Contours (*i.e.* depth).
- 03 = Compass/ Loran.
- 04 = Tide/ Current.
- 05 = Visual (*i.e.* echosounder, surface feeding).
- 98 = Mixed, (more than one code applies) record all set methods on line 14A.
- 99 = Other, record the set method(s) on line 14A.

COMMENTS

Record any additional information regarding this haul, *i.e.* unusual species caught, *etc.* If more room is needed, use the back of this log, making sure to write “See Back” on the front of the log. Reference each comment with its corresponding field name.

**NMFS FISHERIES OBSERVER PROGRAM
LOBSTER, CRAB & FISH POT HAUL LOG**

| | |
|-------------------|-------------|
| OBS/ TRIP ID | A |
| DATE LAND (mm/yy) | B / |
| PAGE # | C OF |

| | | | | | | | | | | | | | |
|-----------------------|------------------------------------|-----------------------------------|--|--|---|--------------------------|---|--|----------------------------------|----------------------------|------|--------|-----|
| GEAR CODE D | GEAR NUMBER(S) 1 | HAUL # E | HAUL OBS? F NO 0 ____ YES 1 ____ | CATCH? G NO 0 ____ YES 1 ____ | INC TAKE? H NO 0 ____ YES 1 ____ | WEATHER CODE I | WIND SPEED J kn DIRECTION K ° | WAVE HEIGHT L ft | DEPTH, HAUL BEGIN M fm | GEAR COND CODE 2 | | | |
| SET INFO | DATE AND TIME mm/dd/yy 24 hours | EST SOAK DUR O R | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TARGET SPECIES O | | CODE(S) P | | | | |
| S BEGIN | 3 / / | 4 : | 5 hrs | Station 1 | Latitude / Bearing N | Station 2 | Longitude / Bearing | NUMBER OF POTS 7 | | | | | |
| T END | / / | : | | | | | | BAIT 10 11 12 13 LBS KIND TYPE COND | | | | | |
| HAUL INFO | DATE | TIME | WATER TEMP | | | | | SET | 8 | | | | |
| H BEGIN | / / | : | | | | | | HAULED | 9 | | | | |
| U END | / / | : | 6 ° F | | | | | LOST | 14 | | | | |
| COMMENTS | | | | | | | SET METHOD 14 Unknown 00 ____ Visual 05 ____ Temperature 01 ____ Mixed 98 ____ Bottom Contours 02 ____ Other 99 ____ Compass/ Loran 03 ____ Tide/ Current 04 ____ 14A | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
| Q | R | S | T | U | V | W | | | | | | | |
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**NMFS FISHERIES OBSERVER PROGRAM
LOBSTER, CRAB & FISH POT HAUL LOG**

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| OBS/ TRIP ID | A74025 |
| DATE LAND (mm/yy) | 06 / 01 |
| PAGE # | 1 OF 2 |

| | | | | | | | | | | | | | |
|------------------|----------------------|--------------|-------------------------------------|----------------------------------|-------------------------------------|---|------------------------------------|---------|---------------------|-----------------------------|----------------------|--------|-----|
| GEAR CODE 200 | GEAR NUMBER(S) 13 | HAUL # 13 | HAUL OBS? NO 0 YES 1 <u>X</u> | CATCH? NO 0 YES 1 <u>X</u> | INC TAKE? NO 0 <u>X</u> YES 1 | WEATHER CODE 02 | WIND SPEED 5 kn DIRECTION 225 ° | | WAVE HEIGHT 2 ft | DEPTH, Haul BEGIN 122 fm | GEAR COND CODE 41 | | |
| SET INFO | | | DATE AND TIME mm/dd/yy 24 hours | O R | EST SOAK DUR | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TARGET SPECIES CODE(S) | | | |
| | | | | | | Station 1 | Latitude / Bearing | | Station 2 | Longitude / Bearing | | | |
| S BEGIN | | | / / | : | | | | | | AMERICAN LOBSTER | | | |
| T END | | | / / | : | 168 . 0 hrs | | | | | NUMBER OF POTS BAIT | | | |
| HAUL INFO | | | DATE | TIME | WATER TEMP | SET <u>40</u> | | | | | | | |
| H BEGIN | | | 06 / 19 / 01 | 21 : 52 | | 41 32.3 | | 69 35.8 | | HAULED <u>40</u> | | | |
| U END | | | 06 / 19 / 01 | 20 : 21 | 58 . 0 F | 41 32.7 | | 69 35.5 | | LOST <u>0</u> | | | |
| COMMENTS | | | | | | SET METHOD | | | | | | | |
| | | | | | | Unknown 00 ____ Visual 05 ____ Temperature 01 ____ Mixed 98 ____ Bottom Contours 02 ____ Other 99 ____ Compass/ Loran 03 <u>X</u> Tide/ Current 04 ____ | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
| AMERICAN LOBSTER | | K | 75 | 100 | R | A | | | | | | | |
| AMERICAN LOBSTER | | D | 1 | 022 | R | A | | | | | | | |
| AMERICAN LOBSTER | | D | 3 | 012 | R | A | | | | | | | |
| JONAH CRAB | | K | 80 | 100 | R | A | | | | | | | |
| OFFSHORE HAKE | | K | 22 | 170 | R | A | | | | | | | |
| JONAH CRAB | | D | 9 | 001 | R | A | | | | | | | |
| | | | | | | | | | | | | | |
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**NMFS FISHERIES OBSERVER PROGRAM
LOBSTER, CRAB & FISH POT HAUL LOG**

| | |
|-------------------|----|
| OBS/ TRIP ID | |
| DATE LAND (mm/yy) | / |
| PAGE # | OF |

| GEAR CODE | GEAR NUMBER(S) | HAUL # | HAUL OBS? NO 0 ____ YES 1 ____ | CATCH? NO 0 ____ YES 1 ____ | INC TAKE? NO 0 ____ YES 1 ____ | WEATHER CODE | WIND | | WAVE HEIGHT ft | DEPTH, HAUL BEGIN fm | GEAR COND CODE | | |
|------------------|------------------------------------|------------|--------------------------------------|--|--------------------------------------|--------------|---------------------|---|-------------------|-------------------------|----------------|--------|-------|
| | | | | | | | SPEED kn | DIRECTION o | | | | | |
| SET INFO | DATE AND TIME mm/dd/yy 24 hours | O R | EST SOAK DUR | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TARGET SPECIES CODE(S) | | | | | |
| S E T | BEGIN | / / | : | 9960- | Latitude / Bearing | 9960- | Longitude / Bearing | NUMBER OF POTS BAIT LBS KIND TYPE COND #1 ____ #2 ____ | | | | | |
| | END | / / | : | | | | | | | | | 9960- | 9960- |
| HAUL INFO | DATE | TIME | WATER TEMP | | | | | SET _____ | | | | | |
| H A U L | BEGIN | / / | : | 9960- | Latitude / Bearing | 9960- | Longitude / Bearing | HAULED _____ | | | | | |
| | END | / / | : | | | | | 9960- | 9960- | LOST _____ | | | |
| COMMENTS | | | | | | | | SET METHOD | | | | | |
| | | | | | | | | Unknown 00 ____ Visual 05 ____ Temperature 01 ____ Mixed 98 ____ Bottom Contours 02 ____ Other 99 ____ Compass/ Loran 03 ____ Tide/ Current 04 ____ | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
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PURSE SEINE GEAR CHARACTERISTICS LOG

This log contains detailed questions about the gear fished. Complete a new log for each uniquely configured gear (as defined below) **set** during a trip. These unique configurations may be based on such variables as net length, purse line length, ring type, *etc.* Any changes in these fields require completion of a new Purse Seine Gear Characteristics Log. Number each gear configuration sequentially.

If the gear is set out and hauled more than once during a trip, do not complete a new Purse Seine Gear Characteristics Log for the multiple sets. Rather, record on the Purse Seine Set Log which gear numbers are being set. In addition, record any other information necessary to understand the manner in which the gear was set/hauled in COMMENTS.

If the vessel has two or more identical gears which are set, complete only one Purse Seine Gear Characteristics Log and record the consecutively assigned numbers of all the identical gears described in GEAR NUMBER(S) (#1). See the purse seine definitions below and GEAR NUMBER(S) (#1) for more information on defining and numbering gears.

If information is unavailable or unknown to any questions except a “No/Yes” question, record a dash (-) in the field. If the answer to a “No/Yes” question is unknown, record a “9” on the line next to the code for “No” to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you have previously answered “No”, leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Purse Seine: A wall of netting equipped with rings (purse rings) along the lower edge, with a cable passing through these rings enabling the fisherman to close off the space surrounded by the net from below. See Figure 1.

Purse Line: The cable passing through the purse rings which, when drawn on, cinches the lower portion of the net closed.

Sack/Bunt: A section of smaller mesh sewn into the net in the middle or at either end which forms a bag-

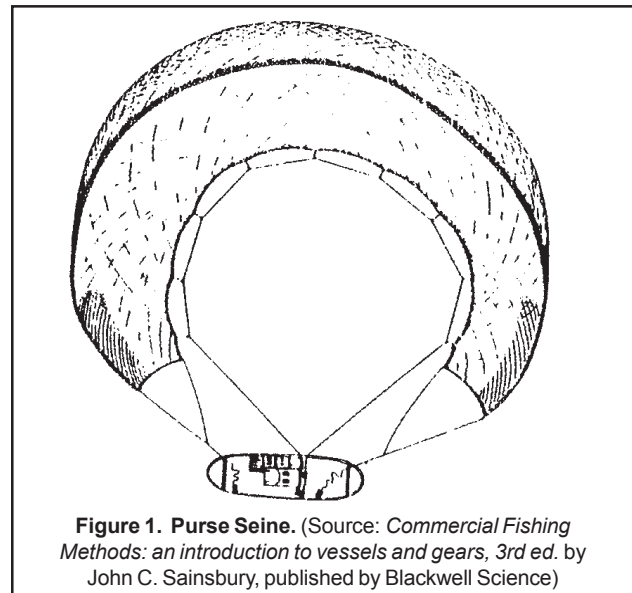


Figure 1. Purse Seine. (Source: *Commercial Fishing Methods: an introduction to vessels and gears*, 3rd ed. by John C. Sainsbury, published by Blackwell Science)

shaped pocket for trapping fish during hauling.

Tom Weight: A special sinker used to reduce the gap between the wings of the seine during the pursing stage. See Figure 3.

Hauling Device: A mechanized device aboard the vessel for hauling in the seine.

Gear: A seine (net and/or bunt), with an attached floatline and leadline, connected along the bottom with rings to a purse line. See Figure 2.

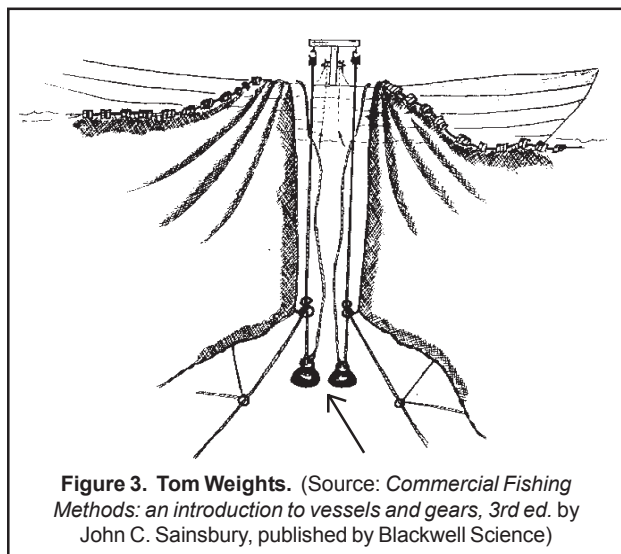
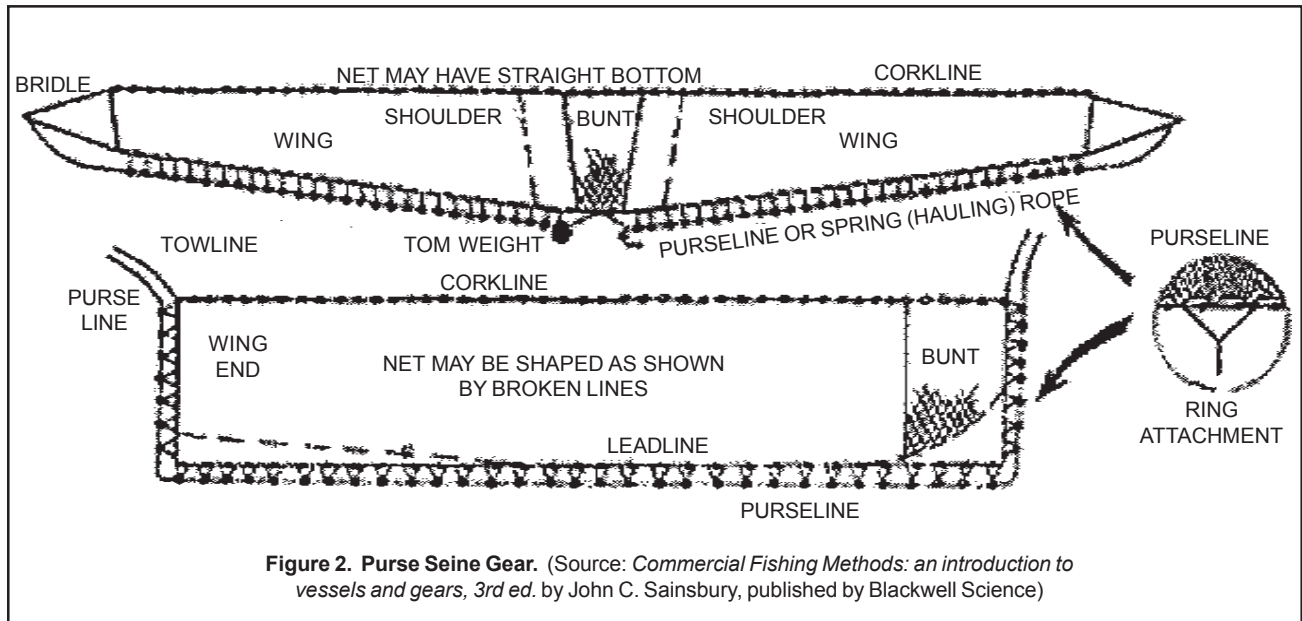
INSTRUCTIONS

For instructions on completing the Header Fields **A, B and D** refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER(S): Record the consecutive number(s) assigned to each uniquely configured gear set and for which characteristics are described. See the definition of gear in the introduction.

NOTE: If two or more identical gears are used, assign consecutive numbers to each gear and record all of these numbers on one Purse Seine Gear Characteristics Log.

Example: The first uniquely configured purse seine is “1”, and its characteristics will



be recorded on one Purse Seine Gear Characteristics Log. Two other purse seines are used during the trip. These differ from #1 but are identical to each other. They are “2” and “3”, and their characteristics are recorded on a second Purse Seine Gear Characteristics Log.

SEINE CHARACTERISTICS

2. NET LENGTH: Record, in whole fathoms, the overall length of the net section of the purse seine. This information may be obtained from the captain. **Do not**

include the length of the sack/bunt in this measurement.

3. SACK/BUNT LENGTH: Record, in whole fathoms, the overall length of the sack/bunt section of the purse seine. This information may be obtained from the captain. **Do not** include the length of the net in this measurement.

4. NET DEPTH: Record, in whole fathoms, the overall depth of the net section. This information may be obtained from the captain.

5. SACK/BUNT DEPTH: Record, in whole fathoms, the overall depth of the sack/bunt section of the purse seine. This information may be obtained from the captain. This section may not be as deep as the NET DEPTH.

6. MESH SIZE OF NET: Record, in hundredths of inches, the mesh size used in the net section of the purse seine for this gear. This information may be obtained from the captain.

Example: The captain says that the mesh size is “1 $\frac{1}{4}$ “. Record “1.25”.

7. MESH SIZE OF SACK/BUNT: Record, in hundredths of inches, the mesh size used in the sack/bunt section of the purse seine for this gear. This information may be obtained from the captain.

Example: The captain says that the mesh size is “1 $\frac{1}{4}$ “. Record “1.25”.

8. TWINE SIZE OF NET: Record, in whole millimeters, the twine size of the net webbing used in this gear. This information may be obtained from the captain.

9. TWINE SIZE OF SACK/BUNT: Record, in whole millimeters, the twine size of the sack/bunt webbing used in this gear. This information may be obtained from the captain.

10. CONSTRUCTION MATERIAL OF NET: Record the type of construction material used in the body of the net (not including the sack/bunt section) by placing and "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Nylon.
- 02 = Poly.
- 03 = Kevlar®.
- 04 = Spectra®.
- 98 = Combination, record all construction material types on line 10A.
- 99 = Other, record the construction material type on line 10A.

11. CONSTRUCTION MATERIAL OF SACK/BUNT: Record the type of construction material used in the body of the sack/bunt (not including the net section) by placing and "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Nylon.
- 02 = Poly.
- 03 = Kevlar®.
- 04 = Spectra®.
- 98 = Combination, record all construction material types on line 11A.
- 99 = Other, record the construction material type on line 11A.

GEAR CHARACTERISTICS

12. FLOATLINE LENGTH: Record, in whole fathoms, the length of floatline used in this gear. This information may be obtained from the captain.

13. FLOATLINE DIAMETER: Record, in hundredths of inches, the diameter of the floatline used in this gear. This information may be obtained from the captain.

14. LEADLINE LENGTH: Record, in whole fathoms, the length of leadline used in this gear. This information may be obtained from the captain.

15. LEADLINE DIAMETER: Record, in hundredths of inches, the diameter of the leadline used in this gear. This information may be obtained from the captain.

16. PURSE LINE LENGTH: Record, in whole fathoms, the length of purse line used in this gear. This information may be obtained from the captain.

17. PURSE LINE DIAMETER: Record, in hundredths of inches, the diameter of the purse line used in this gear. This information may be obtained from the captain.

18. LEADLINE WEIGHT: Record, in whole pounds, the **total** estimated weight of the leadline used in this gear. Do **not** include the weight of any additional weights (*i.e.* tom weights) that are attached to this gear.

ADDITIONAL WEIGHTS

19. USED?: Record whether any additional weights are used on the leadline of this gear by placing and "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

NOTE: Tom weights are additional weights.

20. WEIGHT: Record, in whole pounds, the **total** estimated weight of the additional weights used on the leadline of this gear. Do **not** include the weight of the leadline itself.

21. HAULING DEVICE: Record which device was used for hauling the gear aboard the vessel by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Power Block.
- 2 = Triplex.
- 3 = Drum.
- 9 = Other, record the hauling device on line 21A.

PURSE RINGS

22. TYPE: Record the type of rings used to secure the purse line to the net by place an “X” next to the appropriate code:

- 0 = Unknown.
- 1 = Round.
- 2 = Snap.
- 3 = Combination, record all ring types on line 22A.
- 9 = Other, record the ring type on line 22A.

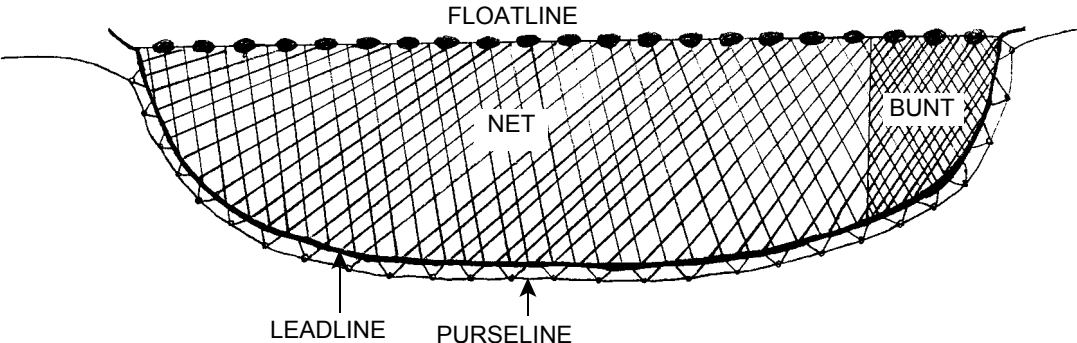
23. MATERIAL: Record the type of material used to construct the rings by place an “X” next to the appropriate code:

- 0 = Unknown.
- 1 = Steel.
- 2 = Iron.
- 3 = Alloy.
- 9 = Other, record the ring type on line 23A.

COMMENTS

Record any additional information about this gear, *i.e.* unusual arrangements of the gear. If more room is needed, use the back of this log, making sure to write “See Back” on the front of this log. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM
PURSE SEINE GEAR CHARACTERISTICS LOG

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------------------------|---|------------|---|------------------------------|-------|----|-----------|-----------|------|----|-----------|-----------|---------|----|-----------|-----------|----------|----|-----------|-----------|-------------|----|-----------|-----------|-------|----|-----------|-----------|--|--|------------|------------|---|--|
| | | | | OBS/TRIP ID A | DATE LANDED mm/yy C / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GEAR NUMBER(S) 1 | GEAR CODE D | GEAR CHARACTERISTICS: <div style="display: flex; justify-content: space-between;"> LENGTH (fm) DIAMETER (in) </div> FLOATLINE <u>12</u> <u>13</u> LEADLINE <u>14</u> <u>15</u> PURSE LINE <u>16</u> <u>17</u> LEADLINE WEIGHT <u>18</u> lbs ADDITIONAL 19 No 0 <u> </u> Yes 1 <u> </u> WEIGHTS <u>20</u> lbs | | HAULING DEVICE 21 Unknown 0 <u> </u> Drum 3 <u> </u> Power Block 1 <u> </u> Other 9 <u> </u> Triplex 2 <u> </u> <div style="text-align: right;">21A</div> PURSE RINGS: <div style="display: flex; justify-content: space-between;"> TYPE 22 MATERIAL 23 </div> Unknown 0 <u> </u> Unknown 0 <u> </u> Round 1 <u> </u> Steel 1 <u> </u> Snap 2 <u> </u> Iron 2 <u> </u> Combo 3 <u> </u> Alloy 3 <u> </u> Other 9 <u> </u> Other 9 <u> </u> <div style="display: flex; justify-content: space-between;"> 22A 23A </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEINE CHARACTERISTICS: <div style="display: flex; justify-content: space-between;"> NET SACK / BUNT </div> LENGTH (fm) <u>2</u> <u>3</u> DEPTH (fm) <u>4</u> <u>5</u> MESH SIZE (in) <u>6</u> <u>7</u> TWINE SIZE (mm) <u>8</u> <u>9</u> CONSTRUCTION MATERIAL <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Unknown</td> <td style="width: 10%;">00</td> <td style="width: 20%; text-align: center;">10</td> <td style="width: 20%; text-align: center;">11</td> </tr> <tr> <td>Nylon</td> <td>01</td> <td style="text-align: center;"><u> </u></td> <td style="text-align: center;"><u> </u></td> </tr> <tr> <td>Poly</td> <td>02</td> <td style="text-align: center;"><u> </u></td> <td style="text-align: center;"><u> </u></td> </tr> <tr> <td>Kevlar®</td> <td>03</td> <td style="text-align: center;"><u> </u></td> <td style="text-align: center;"><u> </u></td> </tr> <tr> <td>Spectra®</td> <td>04</td> <td style="text-align: center;"><u> </u></td> <td style="text-align: center;"><u> </u></td> </tr> <tr> <td>Combination</td> <td>98</td> <td style="text-align: center;"><u> </u></td> <td style="text-align: center;"><u> </u></td> </tr> <tr> <td>Other</td> <td>99</td> <td style="text-align: center;"><u> </u></td> <td style="text-align: center;"><u> </u></td> </tr> <tr> <td colspan="2"></td> <td style="text-align: center;">10A</td> <td style="text-align: center;">11A</td> </tr> </table> | | Unknown | 00 | 10 | 11 | Nylon | 01 | <u> </u> | <u> </u> | Poly | 02 | <u> </u> | <u> </u> | Kevlar® | 03 | <u> </u> | <u> </u> | Spectra® | 04 | <u> </u> | <u> </u> | Combination | 98 | <u> </u> | <u> </u> | Other | 99 | <u> </u> | <u> </u> | | | 10A | 11A | <div style="text-align: center;">(diagram for reference only)</div>  | |
| Unknown | 00 | 10 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nylon | 01 | <u> </u> | <u> </u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poly | 02 | <u> </u> | <u> </u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kevlar® | 03 | <u> </u> | <u> </u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectra® | 04 | <u> </u> | <u> </u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Combination | 98 | <u> </u> | <u> </u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | 99 | <u> </u> | <u> </u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 10A | 11A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMMENTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

01/01/01

OBPSG

NMFS FISHERIES OBSERVER PROGRAM

PURSE SEINE GEAR CHARACTERISTICS LOG

| | |
|-------------------|---------|
| OBS/TRIP ID | E66035- |
| DATE LANDED mm/yy | 09 / 01 |

| | | | | | | | | | |
|---|--|----------------------|--|--|--|---|--|--|--|
| GEAR NUMBER(S) 1 | | GEAR CODE 124 | | GEAR CHARACTERISTICS: | | HAULING DEVICE | | | |
| | | | | LENGTH (fm) DIAMETER (in) FLOATLINE 500 0 . 7 LEADLINE 500 0 . 4 PURSE LINE 600 0 . 6 LEADLINE WEIGHT 32500 lbs ADDITIONAL No 0 <u>X</u> Yes 1 ____ WEIGHTS ____ lbs | | Unknown 0 ____ Drum 3 ____ Power Block 1 <u>X</u> Other 9 ____ Triplex 2 ____ | | | |
| SEINE CHARACTERISTICS: | | | | | | PURSE RINGS: | | | |
| NET SACK / BUNT LENGTH (fm) 500 120 DEPTH (fm) 30 30 MESH SIZE (in) 8 . 0 4 . 0 TWINE SIZE (mm) 2 2 | | | | | | TYPE MATERIAL Unknown 0 ____ Unknown 0 ____ Round 1 ____ Steel 1 ____ Snap 2 <u>X</u> Iron 2 ____ Combo 3 ____ Alloy 3 <u>X</u> Other 9 ____ Other 9 ____ | | | |
| CONSTRUCTION MATERIAL | | | | (diagram for reference only) | | | | | |
| Unknown 00 ____ Nylon 01 <u>X</u> <u>X</u> Poly 02 ____ Kevlar® 03 ____ Spectra® 04 ____ Combination 98 ____ Other 99 ____ | | | | <p>The diagram illustrates a cross-section of a purse seine net. At the top, a line of floats is labeled 'FLOATLINE'. The main body of the net is labeled 'NET'. On the right side, a large, rectangular section is labeled 'BUNT'. At the bottom, a line of floats is labeled 'LEADLINE'. A line connecting the bottom corners of the net is labeled 'PURSELINE'.</p> | | | | | |
| COMMENTS | | | | | | | | | |
| LL WT: 65 lb / 100fm * 500fm = 32500 | | | | | | | | | |

PURSE SEINE GEAR CHARACTERISTICS LOG

| | |
|-------------------|---|
| OBS/TRIP ID | |
| DATE LANDED mm/vv | / |

(diagram for reference only)

FLOATLINE

NET

BUNT

LEADLINE

PURSELINE

PURSE SEINE SET LOG

This log contains detailed questions about the setting and hauling of the gear, and the haul's catch. Complete a new log after each setting of the gear. If you feel that you can not go out on deck for weather related safety reasons, record as much information on this log as possible (*i.e.* Header information, weather, depths, times, positions, *etc.*).

The species summary section of this log should be used to record catches of groundfish species, debris and shells only. If any pelagic species (*i.e.* swordfish, billfish, tuna, bonito, sharks, *etc.*), sturgeons, rays or tagged fish are caught in this set, an Individual Animal Log must be completed to provide information on each animal caught by the gear. This Purse Seine Set Log will serve as a cover sheet for any Individual Animal Log(s) corresponding to this set that may follow. All marine mammals, sea turtles, and sea birds caught in the gear must be recorded on a Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

If there are insufficient lines on one form for all species caught in this set, continue listing species on an additional Purse Seine Set Log, making sure to complete all of the Header Information (A-C) and HAUL NUMBER (E).

If information is unavailable or unknown to any questions except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Set Begin: The skiff hits the water.

Set End: The rings are completely retrieved aboard the vessel.

INSTRUCTIONS

For instructions on completing fields **A-W**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the gear number used for this set as uniquely identified on the appropriate Purse Seine Gear Characteristics Log(s).

2. GEAR CONDITION: Indicate the condition of the gear at haulback, even if this was the condition of the gear when set, by recording the most appropriate two digit code listed below, and in Appendix J. Gear Condition Codes:

- 00 = Unknown.
- 51 = No or insignificant gear damage.
- 52 = Minor wrap of wire around gear.
- 53 = Major wrap of wire around gear.
- 54 = Minor tear-ups of net, not exceeding total of 5% of the net.
- 55 = Tear-up exceeding code 54, but not total, net destruction.
- 58 = Total net destruction.
- 99 = Other, specify in COMMENTS.

3. BEGIN/END DATE: Record the month, day, and year, based on local, that the set began and ended.

4. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000 - 2359), that this set began and ended, *i.e.*, when the skiff hits the water (Set Begin), and when the rings are completely retrieved (Set End).

5. SET SPEED: Record, to the nearest tenth of a knot, the speed of the main vessel setting the net during the set.

6. WATER TEMPERATURE, SET BEGIN: Record, to the nearest tenth of a degree Fahrenheit, the surface water temperature at set begin.

NOTE: If this temperature is obtained in Celsius, use Appendix Q. Conversion

Tables to convert it to Fahrenheit.

NOTE: Use a “ScoopMaster” thermometer to obtain this temperature.

NOTE: Especially if an incidental take occurs in this set, a WATER TEMPERATURE **must** be recorded.

7. PLANE USED: Record whether a spotter plane was used this day by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

8. TIME UP: Record the local time, using the 24 hour clock (0000 - 2359), when the spotter plane took off this day. Arrange with the captain to have the pilot provide you with this information over the radio.

9. TIME DOWN: Record the local time, using the 24 hour clock (0000 - 2359), when the spotter plane landed this day. Arrange with the captain to have the pilot provide you with this information over the radio.

10. SET BY PLANE?: Record whether a spotter plane was used to set on this school of fish by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

11. SET ON DEBRIS?: Record whether this set was made on debris by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

12. SUCCESSFUL SET?: Record whether the captain felt the set was successful by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

13. FISH LOST?: Record whether fish were lost during the setting process by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

NOTE: This information should be obtained from the captain.

Example: Fish escaped over the floatline before the encircling was completed.

COMMENTS

Record any additional information about this gear, *i.e.* unusual set methods, bringing the fish aboard using a suction pump. If more room is needed, use the back of this log, making sure to write “See Back” on the front of this log. Reference each comment with its corresponding field name.

01/01/01

OBPSH, OBHAU, OBSPP

**NMFS FISHERIES OBSERVER PROGRAM
PURSE SEINE SET LOG**

| | |
|-------------------|-------------|
| OBS/TRIP ID | A |
| DATE LANDED mm/yy | B / |
| PAGE # | C of |

| | | | | | | | | | | | | | |
|-----------------------|-------------------------|--------------------|--|-------------------------|--|--------------------------|----------------------------|-------------------------|--|----------------------------------|----------------------------|--------|-----|
| GEAR CODE D | GEAR NUMBER 1 | HAUL # E | HAUL OBS ? F | CATCH ? G | INC TAKE ? H | WEATHER CODE I | WIND | | WAVE HEIGHT L ft | DEPTH, HAUL BEGIN M fm | GEAR COND CODE 2 | | |
| | | | NO 0 ____ YES 1 ____ | NO 0 ____ YES 1 ____ | NO 0 ____ YES 1 ____ | | SPEED J kn | DIRECTION K ° | | | | | |
| SET INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | | | SET SPEED | TARGET SPECIES CODE | | | |
| BEGIN | '3 / / | 4 : | STATION 1 | LATITUDE / Bearing | | STATION 2 | LONGITUDE / Bearing | | 5 . kn | O P | | | |
| END | / / | : | WATER TEMP fahrenheit 6 ° | | PLANE USED? NO 0 ____ YES 1 ____ | TIME UP 8 : hr | TIME DOWN 9 : hr | | NO 0 YES 1 SET BY 10 PLANE ? ____ ____ SET ON 11 DEBRIS ? ____ ____ SUCCESSFUL 12 SET ? ____ ____ FISH 13 LOST ? ____ ____ | | | | |
| COMMENTS | | | | | | | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
| Q | R | S | T | U | V | W | | | | | | | |
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12/01/03

OBPSH, OBHAU, OBSPP

NMFS FISHERIES OBSERVER PROGRAM**PURSE SEINE SET LOG**

| | |
|-------------------|---------|
| OBS/TRIP ID | E66035- |
| DATE LANDED mm/yy | 09 / 01 |
| PAGE # | 1 of 3 |

| | | | | | | | | | | | | | |
|--|-------------------------|--------------------|---|----------------------------------|--------------------------------------|---------------------------|--|-------------------------|----------------------------|--|-----------------------------|--------|-----|
| GEAR CODE 124 | GEAR NUMBER 1 | HAUL # 1 | HAUL OBS ? NO 0 ___ YES 1 _X_ | CATCH ? NO 0 ___ YES 1 _X_ | INC TAKE ? NO 0 _X_ YES 1 ___ | WEATHER CODE 03 | WIND SPEED 10 kn DIRECTION 225 ° | | WAVE HEIGHT 2 ft | DEPTH, HAUL BEGIN 12 fm | GEAR COND CODE 52 | | |
| SET INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) STATION 1 LATITUDE / Bearing STATION 2 LONGITUDE / Bearing | | | | | | SET SPEED | TARGET SPECIES CODE | | | |
| BEGIN | 09 / 14 / 01 | 15 : 55 | 41 51.3 70 28.7 | | | | | | 8 . 0 kn | Bluefin Tuna | | | |
| END | 09 / 14 / 01 | 18 : 35 | WATER TEMP fahrenheit 64 . 8 ° | | PLANE USED? NO 0 ___ YES 1 _X_ | TIME UP 13 : 30 hr | | TIME DOWN 18 : 00 hr | | NO 0 YES 1 SET BY PLANE ? ___ _X_ SET ON DEBRIS ? _X_ ___ SUCCESSFUL SET ? ___ _X_ FISH LOST ? _X_ ___ | | | |
| COMMENTS 15 : 35 Plane set us on school of tuna | | | | | | | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
| Skate, nk | | D | 10 | 001 | R | E | | | | | | | |
| True Crab, NK | | D | 2 | 001 | R | E | | | | | | | |
| Sponge NK | | D | 20 | 001 | R | E | | | | | | | |
| Lobster | | D | 1 | 012 | R | E | | | | | | | |
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01/01/01

OBPSH, OBHAU, OBSPP

NMFS FISHERIES OBSERVER PROGRAM
PURSE SEINE SET LOG

| | |
|-------------------|----|
| OBS/TRIP ID | |
| DATE LANDED mm/yy | / |
| PAGE # | of |

| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS ? NO 0 ____ YES 1 ____ | CATCH ? NO 0 ____ YES 1 ____ | INC TAKE ? NO 0 ____ YES 1 ____ | WEATHER CODE | WIND | | WAVE HEIGHT ft | DEPTH, HAUL BEGIN fm | GEAR COND CODE | | |
|-----------|------------------|------------------|--|------------------------------------|--|-----------------|---------------------|-------------------|-------------------|--|----------------|--------|-----|
| | | | | | | | SPEED kn | DIRECTION O | | | | | |
| SET INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | | | SET SPEED kn | TARGET SPECIES | CODE | | |
| | | | STATION 1 | LATITUDE / Bearing | | STATION 2 | LONGITUDE / Bearing | | | | | | |
| BEGIN | / / | : | 9960- | | | 9960- | | | | | | | |
| END | / / | : | WATER TEMP fahrenheit o | | PLANE USED? NO 0 ____ YES 1 ____ | TIME UP : hr | | TIME DOWN : hr | | NO 0 YES 1 SET BY PLANE ? ____ SET ON DEBRIS ? ____ SUCCESSFUL SET ? ____ FISH LOST ? ____ | | | |
| COMMENTS | | | | | | | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
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BEACH SEINE GEAR / BEACH ANCHORED GILLNET CHARACTERISTICS LOG

This log contains detailed questions about the gear fished. Complete a new log for each uniquely configured gear (as defined below) **hailed** during a trip. These unique configurations may be based on such variables as wing length, bunt height, wash net used, *etc.* Any changes in these fields require completion of a new Beach Seine Gear Characteristics Log. Number each gear configuration sequentially.

If the gear is set out and hauled more than once during an observation, do not complete a new Beach Seine Gear Characteristics Log for the multiple hauls. Rather, record on the Beach Seine Haul Log which gear numbers are being hauled. In addition, record any other information necessary to understand the manner in which the gear was set/hailed in COMMENTS.

If the beach based fishery operator has two or more identical gears which are hauled separately, complete only one Beach Seine Gear Characteristics Log and record the consecutively assigned numbers of all identical gears described in GEAR NUMBER(S) (#1). See the beach seine fishery definitions below and GEAR NUMBER(S) (#1) for more information on defining and numbering gears.

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that a field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Beach Seine: A vertical hanging net set from, and anchored to, the beach. This net may at times cover the entire water column. A beach seine net will include a bunt section at the beach end. At times, a beach seine net may also include a wash net at the beach end. The net will be pulled up onto the beach during haul back. Several techniques for this haul back can be used, but in general 4 wheel drive vehicles are utilized. Sometimes incorrectly referred

to as a haul seine. See Figure 2.

Beach Anchored Gillnet: A vertical hanging net set from, and anchored to, the beach. This net may, at times, cover the entire water column. This net will **not** include a bunt or wash net section but rather be comprised solely of monofilament gillnet. Set and haul techniques are the same as with a beach seine net. See Figure 3.

Bunt: A short section (approx. 30 ft.) of twisted multifilament nylon. This section is located on the beach end of a beach seine net and is intended to trap fish, without gilling, so that they can be hauled up onto the beach.

Wing: The main component of a beach seine net. It is a monofilament nylon gillnet. One, two, or more nets can be used in the wing. If more than one net is used then the net closest to the beach is net #1. Fish can be filled in the wing or it can be hauled in such a manner as to "corral" the fish.

Wash Net: A short section (approx. 10 ft.) of monofilament gillnet attached on the beach end of a beach seine net. This net is generally heavier twine and larger mesh than what is used in the wing. The intent of this net is to allow debris, caught in the surf zone, to pass through without being caught.

INSTRUCTIONS

For instructions on completing the Header Fields **A**, **B**, and **D**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER(S): Record the consecutive number(s) assigned to each uniquely configured gear hauled and for which the characteristics are described. See the definition of gear in the introduction.

NOTE: If two or more identical gears are used, assign consecutive numbers to each gear and record all of these numbers on one Beach Seine Gear Characteristics Log.

Example: The first uniquely configured beach seine is "1", and its characteristics will be recorded on one Beach Seine Gear

Characteristics Log. Two other beach seines are hauled during the observation. These differ from #1 but are identical to each other. They are “2” and “3”, and their characteristics are recorded on a second Beach Seine Gear Characteristics Log.

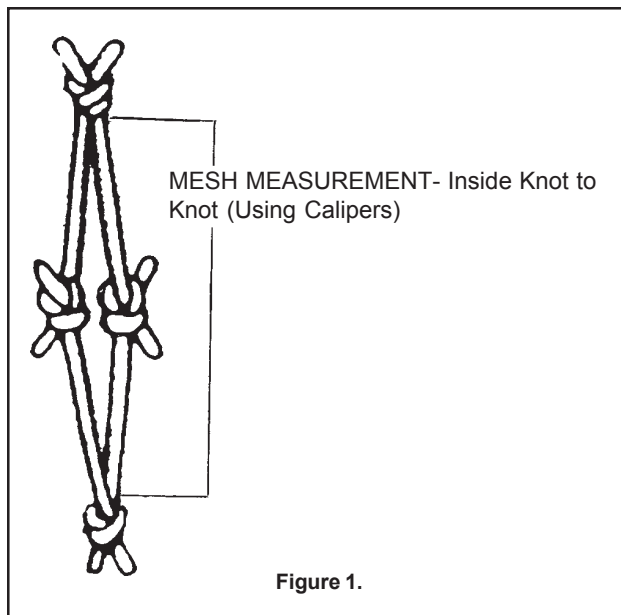
2. NUMBER OF NETS: Record the **total** number of individual nets in the wing of this gear. **Do not** include the bunt or wash net in this count.

BUNT CHARACTERISTICS

If no bunt is used in this gear, record a dash (-) in fields #3 - #13.

3. LENGTH: Record, in whole feet, the total length of the bunt in this gear as measured along the floatline. This information may be obtained from the operator. **Do not** include the length of the wing or wash net in this length.

4. HEIGHT: Record, to the nearest tenth of a foot, the height of the bunt in this gear. This value is ob-



tained by measuring the height along one endline. This information may also be obtained from the operator.

5. MESH SIZE: Record, to the nearest hundredth of an inch, the mesh size used in the bunt of this gear.

This value may be obtained by measuring a stretched mesh using calipers. This measurement should be taken inside, from knot to knot, in the direction in which the mesh is hung. See Figure 1 and Appendix P. Vernier Caliper Instructions for further information. This information may also be obtained from the operator.

6. ACTUAL/ESTIMATED: Indicate whether the bunt mesh size is an actual or estimated measurement by circling the appropriate letter:

A = Actual.

E = Estimated.

NOTE: An **actual** mesh size measurement is obtained using calipers. See MESH SIZE (#5) for measurement instructions. An **estimated** mesh size measurement is provided by the operator.

7. MESH COUNT, VERTICAL: Record the number of vertical meshes of the bunt used in this gear. This information may be obtained by counting the number of individual meshes along one endline. This information may also be obtained from the operator.

8. HANGING RATIO: Record the average fractional ratio of the length of the floatline for the bunt to the length that the bunt would be if it was taken off the floatline and stretched out. This value can be calculated by counting 10 or 12 meshes horizontally, measuring the length of the floatline they are attached to, and comparing that distance to the stretched out length of the meshes. This information may also be obtained from the operator.

Example: If the stretched out distance of the meshes is two times the length of the floatline, record “ $\frac{1}{2}$ ”.

TWINE SIZE

9. NUMBER: Record the twine size number (industry standard) of the bunt webbing used in this gear. This information may be obtained using a twine size measuring tool provided by the NEFSC Observer Program or contractor. This information may also be obtained from the operator. See Appendix Q. Conversion Tables for a listing of industry standard twine size numbers and their corresponding diameters.

NOTE: This number should reflect the total diameter of the bunt webbing, and not

the diameter of an individual strand which may be twisted with other strands to create the bunt webbing.

10. ACTUAL/ESTIMATED: Indicate whether the bunt twine size number is an actual or estimated measurement by circling the appropriate letter:

A = Actual.
E = Estimated.

NOTE: An **actual twine size number** is obtained using a measuring tool provided by the NEFSC Observer Program or contractor. An **estimated twine size number** is provided by the operator.

11. NUMBER OF STRANDS: Record the number of strands of twine in the bunt webbing used in this gear. This information may be obtained from the operator.

NOTE: This number should reflect the total number of individual strands used to make up the bunt webbing.

Example: Monofilament has 1 strand.

12. COLOR: Indicate the color of the bunt webbing used in this gear by recording the most appropriate two digit code listed below:

00 = Unknown.
01 = Clear.
02 = White.
03 = Pink.
04 = Black.
05 = Green.
06 = Blue.
07 = Multicolor, record all colors in COMMENTS section.
08 = Red.
09 = Orange.
10 = Purple.
98 = Combination, record all colors in COMMENTS section.
99 = Other, record the color in the COMMENTS section.

NOTE: "Multicolor" = 07, should be used **only** if more than one color of webbing is used within the bunt.

13. MATERIAL: Record the material of the bunt webbing used in this gear by placing an "X" next to the

appropriate code:

0 = Unknown.
1 = Nylon.
9 = Other, record the bunt webbing material on line 13A.

NOTE: This information may be obtained from the operator.

WING CHARACTERISTICS

If only one net is used in the wing portion of the gear, record a dash (-) in fields #25 - #35. If two nets are used, the net nearest the beach is net #1.

14. (25.) NET LENGTH: Record, in whole feet, the total length of the net in this gear as measured along the floatline. This information may be obtained from the operator. Do not include the length of the bunt or wash net in this length.

15. (26.) NET HEIGHT: Record, to the nearest tenth of a foot, the height of the net in this gear. This value is obtained by measuring the height along one endline. This information may also be obtained from the operator.

16. (27.) NET MESH SIZE: Record, to the nearest hundredth of an inch, the mesh size used in the net in this gear. This value may be obtained by measuring a stretched mesh using calipers. This measurement should be taken inside, from knot to knot, in the direction in which the mesh is hung. See Figure 1 and Appendix P. Vernier Caliper Instructions for further information. This information may also be obtained from the operator.

17. (28.) ACTUAL/ESTIMATED: Indicate whether the net mesh size is an actual or estimated measurement by circling the appropriate letter:

A = Actual.
E = Estimated.

NOTE: An **actual** mesh size measurement is obtained using calipers. See MESH SIZE (#16) for measurement instructions. An **estimated** mesh size measurement is provided by the operator.

18. (29.) NET MESH COUNT, VERTICAL:

Record the number of vertical meshes of the net used in this gear. This information may be obtained by counting the number of individual meshes along one endline. This information may also be obtained from the operator.

19. (30.) NET HANGING RATIO: Record the average fractional ratio of the length of the floatline to the length that the net would be if it was taken off the floatline and stretched out. This value can be calculated by counting 10 or 12 meshes horizontally, measuring the length of the floatline they are attached to, and comparing that distance to the stretched out length of the meshes. This information may also be obtained from the operator.

Example: If the stretched out distance of the meshes is two times the length of the floatline, record " $\frac{1}{2}$ ".

TWINE SIZE

20. (31.) NUMBER: Record the twine size number (industry standard) of the net webbing used in this gear. This information may be obtained using a twine size measuring tool provided by the NEFSC Observer Program or contractor. This information may also be obtained from the operator. See Appendix Q. Conversion Tables for a listing of industry standard twine size numbers and their corresponding diameters.

NOTE: This number should reflect the total diameter of the net webbing, and not the diameter of an individual strand which may be twisted with other strands to create the net webbing.

21. (32.) ACTUAL/ESTIMATED: Indicate whether the net twine size number is an actual or estimated measurement by circling the appropriate letter:

A = Actual.

E = Estimated.

NOTE: An **actual twine size number** is obtained using a measuring tool provided by the NEFSC Observer Program or contractor. An **estimated twine size number** is provided by the operator.

22. (33.) NUMBER OF STRANDS: Record the number of strands of twine in the net webbing used in this gear. This information may be obtained from the

operator.

NOTE: This number should reflect the total number of individual strands used to make up the net webbing.

Example: Monofilament has 1 strand.

23. (34.) NET COLOR: Indicate the color of the net webbing used in this gear by recording the most appropriate two digit code listed below:

00 = Unknown.

01 = Clear.

02 = White.

03 = Pink.

04 = Black.

05 = Green.

06 = Blue.

07 = Multicolor, record all colors in COMMENTS section.

08 = Red.

09 = Orange.

10 = Purple.

98 = Combination, record all colors in COMMENTS section.

99 = Other, record the color in the COMMENTS section.

NOTE: "Multicolor" = 07, should be used **only** if more than one color of webbing is used within the wing.

24. (35.) NET MATERIAL: Record the material of the wing webbing used in this gear by placing an "X" next to the appropriate code:

0 = Unknown.

1 = Nylon.

9 = Other, record the wing webbing material on line 24A (35A).

NOTE: This information may be obtained from the operator.

GEAR CHARACTERISTICS

BUNT

36. BUNT USED?: Record whether a bunt is used in this gear by placing an "X" next the appropriate code:

0 = No.

1 = Yes.

WASH NET

37. USED?: Record whether a wash net is used in this gear by placing an "X" next the appropriate code:

0 = No.

1 = Yes.

38. LENGTH: Record, in whole feet, the horizontal length of the wash net used in this gear. This information may be obtained from the operator.

FLOATS

39. USED?: Record whether floats are used on this gear by placing an "X" next the appropriate code:

0 = No.

1 = Yes.

40. DISTANCE BETWEEN: Record, in whole feet, the **average** distance along the floatline between floats used on this gear. This information may be obtained from the operator.

ANCHOR(S)

41. USED?: Record whether anchors were used on this gear by placing an "X" next the appropriate code:

0 = No.

1 = Yes.

42. NUMBER: Record the total number of anchors used in this gear.

43. WEIGHT: Record, in whole pounds, the **total** weight of the anchor(s) used to hold this gear in place. This information may be obtained from the operator.

44. WEIGHT - ACTUAL OR ESTIMATED: Record whether the weight recorded in #42 is an actual or estimated weight by placing an "X" next to the appropriate code:

1 = Actual.

2 = Estimated.

45. FLOATLINE MATERIAL: Record the material of the floatline used in this gear by placing an "X" next to the appropriate code:

0 = Unknown.

1 = Floating (foam core).

2 = Twisted Polypropylene.

9 = Other, record the floatline material on line 45A.

46. LEADLINE WEIGHT: Record, in whole pounds, the total weight of the leadline used in this gear. This information may be obtained from the operator.

ACTIVE MARINE MAMMAL DETERRENT DEVICES

An "active" marine mammal deterrent device is a device which emits sound which may be detected by a marine mammal.

47. USED?: Record whether "active" marine mammal deterrent devices (*i.e.* pingers) were used on this gear when it was set by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

48. NUMBER: Record the number of active marine mammal deterrent devices (*i.e.* pingers) on the gear **when it was set**. This information can be obtained from the operator if the set is not observed.

49. BRAND: Record the brand of active marine mammal deterrent devices used on this gear. If more than one brand of active deterrent devices are used, record the brand of the majority of the active deterrent devices on the gear. If an equal number of different active deterrent device brands are used, record a dash (-) and indicate the brands in COMMENTS.

Example: Dukane.

50. FREQUENCY: Record the frequency of the active marine mammal deterrent devices used on this gear in kilohertz (kHz). If more than one frequency of active deterrent device is used, record the frequency of the majority of the active deterrent devices on the gear. If an equal number of different frequency active deterrent devices are used, record the highest frequency used.

Example: 10 kHz.

PASSIVE MARINE MAMMAL DETERRENT DEVICES

A “passive” marine mammal deterrent device is a device which may provide reflection of marine mammal echolocation signals.

51. USED?: Record whether “passive” marine mammal deterrent devices were used on this gear when it was set by placing an “X” next to the appropriate code:

0 = No.

1 = Yes.

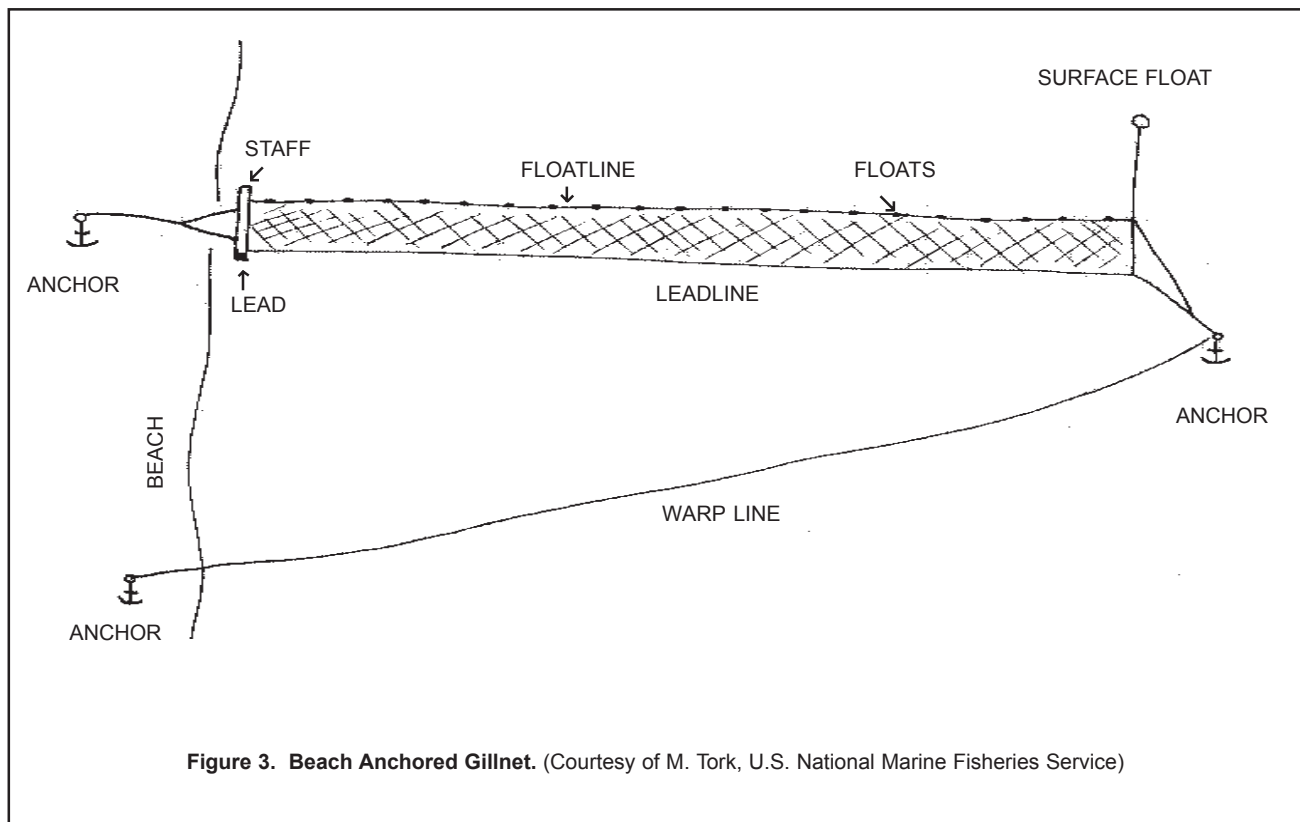
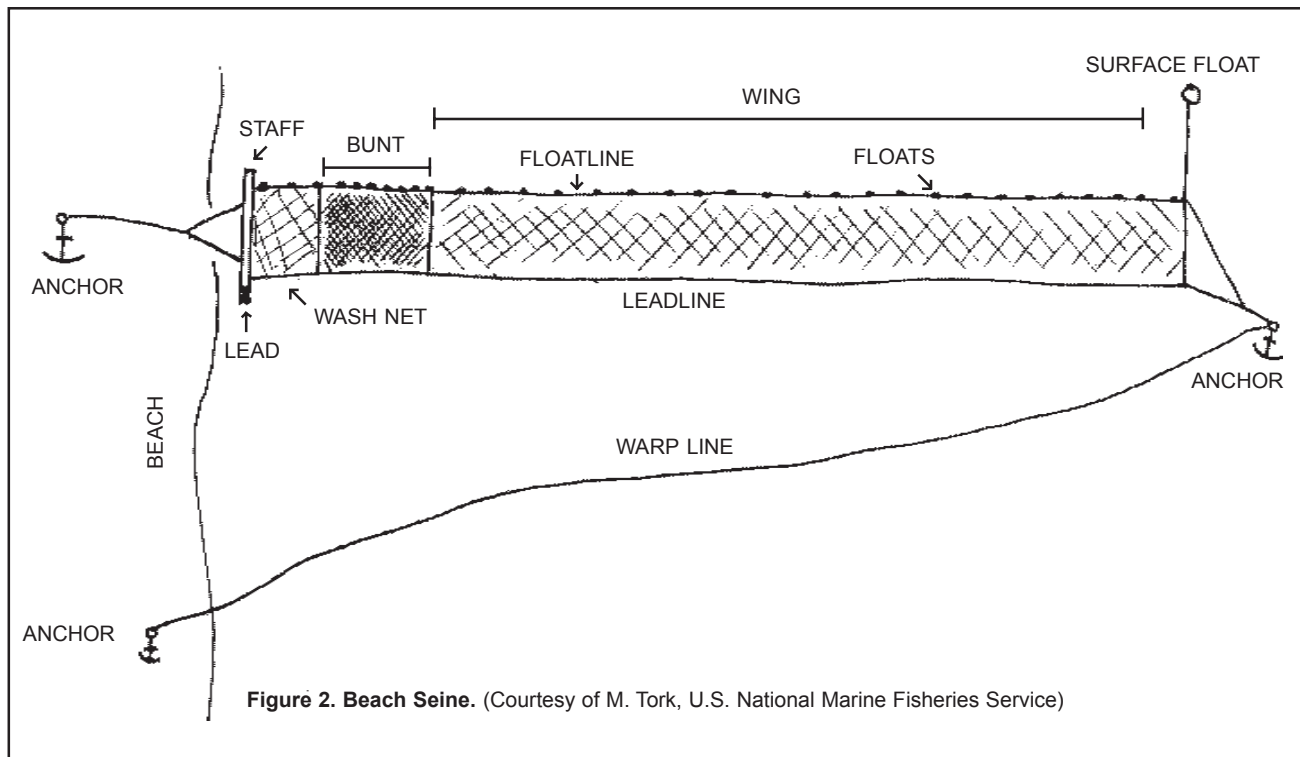
Example: Net material that is designed to be more acoustically visible to marine mammals.

52. NUMBER: Record the number of passive marine mammal deterrent devices on the gear when it was set. This information can be obtained from the operator if the set is not observed.

NOTE: If some or all of the nets in the gear are made from material that is designed to be more acoustically visible to marine mammals, record the **number of nets** within the gear made from this material.

COMMENTS

Record any additional information about this gear, *i.e.* unusual arrangements of the gear, *etc.* If more room is needed, use the back of this log, making sure to write “See Back” on the front of the log. Reference each comment with its corresponding field name.



NMFS FISHERIES OBSERVER PROGRAM
BEACH SEINE GEAR LOG

| | | | |
|--|-----------------------------------|--|--|
| | | OBS/ TRIP ID | A |
| | | DATE LAND (mm/yy) | B / |
| GEAR CODE D | GEAR NUMBER(S) 1 | NUMBER OF NETS 2 | |
| BUNT CHARACTERISTICS: LENGTH <u>3</u> ft HEIGHT <u>. 4</u> ft MESH SIZE <u>. 5</u> in 6 A / E (CIRCLE ONE) MESH COUNT, VERTICAL <u>7</u> HANGING RATIO <u>/ 8</u> TWINE 10 A / E SIZE <u>9</u> (CIRCLE ONE) # STRANDS <u>11</u> COLOR CODE <u>12</u> NET MATERIAL 13 Unknown 0 ____ Nylon 1 ____ Other 9 ____ <u>13A</u> | | WING CHARACTERISTICS: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> NET 1 LENGTH <u>14</u> ft HEIGHT <u>. 15</u> ft MESH SIZE <u>. 16</u> in 17 A / E (CIRCLE ONE) MESH COUNT, VERTICAL <u>18</u> HANGING RATIO <u>/ 19</u> TWINE 21 A / E SIZE <u>20</u> (CIRCLE ONE) # STRANDS <u>22</u> COLOR CODE <u>23</u> NET MATERIAL 24 Unknown 0 ____ Nylon 1 ____ Other 9 ____ <u>24A</u> </div> <div style="width: 48%;"> NET 2 LENGTH <u>25</u> ft HEIGHT <u>. 26</u> ft MESH SIZE <u>. 27</u> in 28 A / E (CIRCLE ONE) MESH COUNT, VERTICAL <u>29</u> HANGING RATIO <u>/ 30</u> TWINE 32 A / E SIZE <u>31</u> (CIRCLE ONE) # STRANDS <u>33</u> COLOR CODE <u>34</u> NET MATERIAL 35 Unknown 0 ____ Nylon 1 ____ Other 9 ____ <u>35A</u> </div> </div> | |
| | | GEAR CHARACTERISTICS: USED ? NO YES 36 BUNT 0__ 1__ 37 WASH NET 0__ 1__ Length <u>38</u> ft 39 FLOATS 0__ 1__ Dist Between <u>40</u> ft 41 ANCHOR (S) 0__ 1__ Number <u>42</u> Weight (total) <u>43</u> lb Actual 1 ____ 44 Estimated 2 ____ | COLOR CODES Unknown 00 Clear 01 White 02 Pink 03 Black 04 Green 05 Blue 06 Multi-color 07 Red 08 Orange 09 Purple 10 Combination 98 Other 99 |
| | | FLOATLINE MATERIAL 45 Unknown 0 ____ Floating (foam core) 1 ____ Twisted Polypropylene 2 ____ Other 9 ____ <u>45A</u> | LEADLINE WEIGHT <u>46</u> lbs |
| MM DETERRENT DEVICES USED? ACTIVE 0__ 1__ 47 Number <u>48</u> BRAND <u>49</u> FREQUENCY <u>50</u> kHz PASSIVE 0__ 1__ 51 Number <u>52</u> | | COMMENTS | |

NMFS FISHERIES OBSERVER PROGRAM
BEACH SEINE GEAR LOG

| OBS/ TRIP ID V03011- | | DATE LAND (mm/yy) 06 / 01 | | | | | |
|---|----------------------------|---|--|--------------------|-----------------|--|---------------|
| GEAR CODE 070 | GEAR NUMBER(S) 1 | NUMBER OF NETS 2 | | | | | |
| BUNT CHARACTERISTICS: LENGTH <u>30</u> ft HEIGHT <u>10.0</u> ft MESH SIZE <u>4.00</u> in A / <u>E</u> (CIRCLE ONE) MESH COUNT, VERTICAL <u>25</u> HANGING RATIO <u>1</u> / <u>2</u> TWINE SIZE <u>10</u> (CIRCLE ONE) A / <u>E</u> # STRANDS <u>3</u> COLOR CODE <u>04</u> NET MATERIAL Unknown 0 ____ Nylon 1 ____ Other 9 <u>X</u> <u>cotton</u> | | WING CHARACTERISTICS: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> NET 1 LENGTH <u>200</u> ft HEIGHT <u>10.0</u> ft MESH SIZE <u>4.00</u> in A / <u>E</u> (CIRCLE ONE) MESH COUNT, VERTICAL <u>25</u> HANGING RATIO <u>1</u> / <u>2</u> TWINE SIZE <u>10</u> (CIRCLE ONE) A / <u>E</u> # STRANDS <u>1</u> COLOR CODE <u>05</u> NET MATERIAL Unknown 0 ____ Nylon 1 <u>X</u> Other 9 ____ </div> <div style="width: 48%;"> NET 2 LENGTH <u>250</u> ft HEIGHT <u>12.5</u> ft MESH SIZE <u>4.25</u> in A / <u>E</u> (CIRCLE ONE) MESH COUNT, VERTICAL <u>20</u> HANGING RATIO <u>1</u> / <u>2</u> TWINE SIZE <u>10</u> (CIRCLE ONE) A / <u>E</u> # STRANDS <u>1</u> COLOR CODE <u>02</u> NET MATERIAL Unknown 0 ____ Nylon 1 <u>X</u> Other 9 ____ </div> </div> | | | | | |
| | | GEAR CHARACTERISTICS: USED ? NO YES BUNT 0 ____ 1 <u>X</u> WASH NET 0 <u>X</u> 1 ____ Length ____ ft FLOATS 0 ____ 1 <u>X</u> Dist Between <u>5</u> ft ANCHOR (S) 0 ____ 1 <u>X</u> Number <u>4</u> Weight (total) <u>80</u> lb Actual 1 ____ Estimated 2 <u>X</u> | | | | | |
| | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 60%;">FLOATLINE MATERIAL</th> <th style="width: 40%;">LEADLINE WEIGHT</th> </tr> <tr> <td> Unknown 0 ____ Floating (foam core) 1 ____ Twisted Polypropylene 2 <u>X</u> Other 9 ____ _____ </td> <td style="text-align: center; vertical-align: middle;"> <u>37</u> lbs </td> </tr> </table> | | FLOATLINE MATERIAL | LEADLINE WEIGHT | Unknown 0 ____ Floating (foam core) 1 ____ Twisted Polypropylene 2 <u>X</u> Other 9 ____ _____ | <u>37</u> lbs |
| FLOATLINE MATERIAL | LEADLINE WEIGHT | | | | | | |
| Unknown 0 ____ Floating (foam core) 1 ____ Twisted Polypropylene 2 <u>X</u> Other 9 ____ _____ | <u>37</u> lbs | | | | | | |
| MM DETERRENT DEVICES USED? ACTIVE 0 <u>X</u> 1 ____ Number ____ BRAND _____ FREQUENCY _____ kHz PASSIVE 0 <u>X</u> 1 ____ Number ____ | | COMMENTS <div style="text-align: right; padding-top: 20px;"> Anchors: 2 (25 lb) danforths on beach and two (30 lb) sand bags on each end of net. </div> <div style="text-align: center; padding-top: 20px;"> LL WT: 50 lb / 600 ft * 450 ft = 37.49 lb </div> | | | | | |

NMFS FISHERIES OBSERVER PROGRAM
BEACH SEINE GEAR LOG

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|---|-----------------------|--|---|
| | | OBS/ TRIP ID | |
| | | DATE LAND (mm/yy) | / |
| GEAR CODE | GEAR NUMBER(S) | NUMBER OF NETS | |
| BUNT CHARACTERISTICS: LENGTH _____ ft HEIGHT _____ ft MESH SIZE _____ in A / E (CIRCLE ONE) MESH COUNT, VERTICAL _____ HANGING RATIO _____ / _____ TWINE A / E SIZE _____ (CIRCLE ONE) # STRANDS _____ COLOR CODE _____ NET MATERIAL Unknown 0 _____ Nylon 1 _____ Other 9 _____ | | WING CHARACTERISTICS: <div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> NET 1 LENGTH _____ ft HEIGHT _____ ft MESH SIZE _____ in A / E (CIRCLE ONE) MESH COUNT, VERTICAL _____ HANGING RATIO _____ / _____ TWINE A / E SIZE _____ (CIRCLE ONE) # STRANDS _____ COLOR CODE _____ NET MATERIAL Unknown 0 _____ Nylon 1 _____ Other 9 _____ </div> <div style="width: 45%;"> NET 2 LENGTH _____ ft HEIGHT _____ ft MESH SIZE _____ in A / E (CIRCLE ONE) MESH COUNT, VERTICAL _____ HANGING RATIO _____ / _____ TWINE A / E SIZE _____ (CIRCLE ONE) # STRANDS _____ COLOR CODE _____ NET MATERIAL Unknown 0 _____ Nylon 1 _____ Other 9 _____ </div> </div> | |

BEACH SEINE/BEACH ANCHORED GILLNET HAUL LOG

This log contains detailed questions about the setting and hauling of gear, and the haul's catch. Complete a new log after each hauling of gear.

The Species Information section of this log should be used to record catches of groundfish species, debris and shells according to the sampling protocol being followed during that particular observation. For more information, refer to the Fishery Sampling Priority Section of the NEFSC Observer Program Biosampling Manual. If the gear is hauled onto the beach, then the observer will record complete catch data, *i.e.* both kept and discarded species information, and should indicate "Yes (1)" for HAUL OBSERVED? (F). If the gear is "fished-over" (the dory is used to check the gear while it is in the water), then the observer will record only species information on the kept catch, and should indicate "No (0)" for HAUL OBSERVED? (F). The observer will conduct marine mammal haul watches during **every haul** for which the observer is present and should always indicate "Yes (1)" for MARINE MAMMAL HAUL WATCH? (#2).

If any pelagic species (*i.e.* swordfish, billfish, large tuna species, sharks, *etc.*), sturgeons, rays or tagged fish are caught by the gear, an Individual Animal Log must be completed to provide information on each animal. This Beach Seine/Beach Anchored Gillnet Haul Log will serve as a cover sheet for any Individual Animal Log(s) corresponding to this haul that may follow. All marine mammals, sea turtles and sea birds caught by the gear must be recorded on a Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

If there are insufficient lines on one form for all species caught in this haul, continue listing species on an additional Beach Seine/Beach Anchored Gillnet Haul Log, making sure to complete all of the Header Information (A-C) and HAUL NUMBER (E).

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that a field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field

blank.

Become familiar with the following definitions.

DEFINITIONS

Haul Begin: Time that gear hauling (retrieving) begins, whether it is the warp line or the actual net.

Haul End: Time that the last piece of the gear is pulled up onto the beach.

INSTRUCTIONS

For instructions on completing fields **A-W**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the gear number used for this haul as uniquely identified on the appropriate Beach Seine/Beach Anchored Gillnet Gear Characteristics Log.

2. MARINE MAMMAL HAUL WATCH?: Record whether a marine mammal, sea turtle, and debris haul watch is conducted during this haul by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

NOTE: These watches will be conducted for **every haul**.

3. GEAR CONDITION: Indicate the condition of the gear at haulback, even if this was the condition of the gear when set, by recording the most appropriate two digit code listed below, and in Appendix J. Gear Condition Codes:

00 = Unknown.

21 = No gear damage, or very few small, scattered holes.

22 = Small number of torn meshes, not exceeding 25% of any one net, each net may be torn slightly.

23 = Less than 50% of the nets have less than 50% of the meshes torn.

24 = 50% or more of the nets have less than

- 50% of the meshes torn.
- 25 = Less than 50% of the nets are obstructed by a large object.
- 26 = 50% or more of the nets are obstructed by a large object.
- 27 = Less than 50% of the nets have 50% or more of the meshes torn.
- 28 = 50% or more of the nets have 50% or more of the meshes torn.
- 29 = Nets in the string totally balled up.
- 99 = Other, specify in COMMENTS.

HAUL INFORMATION

4. BEGIN/END DATE: Record the month, day, and year, based on local time, that this haul began and ended.

5. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000-2359), that this haul began and ended, *i.e.* when hauling of the shoreward warp line commences (Haul Begin). And when the last portion of the net exit(s) the surf zone (Haul End).

6. ESTIMATED SOAK DURATION: Record, to the nearest tenth of an hour, the amount of time that the gear for this haul is in the water fishing. This is the amount of time from when the gear is secured to the beach after complete deployment (Set End), until the hauling of the shoreward warp line commences (Haul Begin). This time may be obtained from the operator if the setting of the gear is not witnessed.

7. END WATER TEMPERATURE: Record, to the nearest tenth of a degree Fahrenheit, the surface sea water temperature when this haul **ended**.

NOTE: If this temperatures is obtained in Celsius, use Appendix Q. Conversion Tables to convert it to Fahrenheit.

NOTE: Use a "ScoopMaster" thermometer to obtain this temperature.

NOTE: Especially if an incidental take occurs in this haul, a HAUL END WATER TEMPERATURE **must** be recorded.

NUMBER OF NETS

8. SET: Record the **total** number of nets that are used for this set. This number should agree with the

number recorded in NUMBER OF NETS on the corresponding Beach Seine/Beach Anchored Gillnet Gear Characteristics Log(s).

9. HAULED: Record the **total** number of nets that are hauled back from this set. If a net is partially hauled, round this number to the nearest whole net.

Example: If 200 feet of a 300 feet net is hauled record one net hauled.

NOTE: Record a zero "0" if less than half of one net of a string is hauled.

10. LOST: Record the **total** number of nets that are lost from this set. If this number differs from NUMBER OF NETS SET minus NUMBER OF NETS HAULED record the reason(s) in COMMENTS.

NUMBER OF MARINE MAMMAL DETERRENT DEVICES

ACTIVE:

An "active" marine mammal deterrent device is a device which emits sound which may be detected by a marine mammal.

11. HAULED: Record the number of active marine mammal deterrent devices (*i.e.* pingers) on the gear as it is hauled. This number should agree with the number recorded in NUMBER OF ACTIVE MARINE MAMMAL DETERRENT DEVICES USED on the corresponding Beach Seine/Beach Anchored Gillnet Gear Characteristics Log(s).

NOTE: If gear is partially hauled, record the number of marine mammal deterrent devices **only on** the portion of gear hauled.

NOTE: These numbers should reflect the number of these devices on the gear regardless of whether or not it is believed these devices are actually working. Information of this nature should be recorded in the COMMENTS.

12. LOST: Record the number of active marine mammal deterrent devices (*i.e.* pingers) lost from this set. If this number differs from NUMBER OF ACTIVE MARINE MAMMAL DETERRENT DEVICES USED minus NUMBER OF ACTIVE MARINE

MAMMAL DETERRENT DEVICES HAULED, then record the reason(s) in COMMENTS.

NOTE: Do not include devices not seen because gear was partially hauled.

PASSIVE:

A “passive” marine mammal deterrent device is a device which may provide reflection of marine mammal echolocation signals.

13. HAULED: Record the number of passive marine mammal deterrent devices on the gear as it is hauled. This number should agree with the number recorded in NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES USED on the corresponding Beach Seine/Beach Anchored Gillnet Gear Characteristics Log(s).

Example: Net material that is designed to be more acoustically visible to marine mammals.

NOTE: If some or all of the nets in the gear are made from material that is designed to be more acoustically visible to marine mammals, record the **number of nets** within the gear made from this material.

NOTE: If gear is partially hauled, record the number of marine mammal deterrent devices **only on** the portion of gear hauled.

14. LOST: Record the number of passive marine mammal deterrent devices lost from this set. If this number differs from NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES USED minus NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES HAULED, then record the reason(s) in COMMENTS.

NOTE: Do not include devices not seen because gear was partially hauled.

COMMENTS

Record any additional information regarding this haul, *i.e.* unusual species caught, area of fishing activity, *etc.* If more room is needed, use the back of this log, making sure to write “See Back” on the front of the log. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM

BEACH SEINE / BEACH ANCHORED HAUL LOG

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| OBS / TRIP ID | A |
| DATE LAND (mm/yy) | B / |
| PAGE # | C OF |

| | | | | | | | | | | | | | |
|-----------------------|-------------------------|--------------------|--|--|---|--|----------------------------|--|------------------------|----------------------------|----------------------------|--------|-----|
| GEAR CODE D | GEAR NUMBER 1 | HAUL # E | HAUL OBS? F NO 0 ____ YES 1 ____ | MM WATCH? 2 NO 0 ____ YES 1 ____ | CATCH? G NO 0 ____ YES 1 ____ | INC TAKE? H NO 0 ____ YES 1 ____ | WEATHER CODE I | WIND SPEED J kn DIRECTION K ° | | WAVE HEIGHT L ft | GEAR COND CODE 3 | | |
| HAUL INFO | DATE | TIME (24 hours) | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | | EST SOAK DUR | TARGET SPECIES CODE(S) | | | | |
| H A U L | BEGIN 4 / / | 5 : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | | 6 . hrs | O P | | | | |
| COMMENTS | | | | | | | WATER TEMP 7 ° F | NUMBER OF NETS | | IF MM DETERRENTS USED: | | | |
| | | | | | | | SET | 8 | ACTIVE | PASSIVE | | | |
| | | | | | | | HAULED | 9 | HAULED | 11 13 | | | |
| | | | | | | | LOST | 10 | LOST | 12 14 | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
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NMFS FISHERIES OBSERVER PROGRAM

BEACH SEINE / BEACH ANCHORED HAUL LOG

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| OBS / TRIP ID | V03011- |
| DATE LAND (mm/yy) | 06 / 01 |
| PAGE # | 1 OF 2 |

| | | | | | | | | | | |
|--|-------------------------|--------------------|---|---|--|---|---------------------------|--|----------------------------|-----------------------------|
| GEAR CODE 070 | GEAR NUMBER 1 | HAUL # 1 | HAUL OBS? NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | MM WATCH? NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | CATCH? NO 0 <input type="checkbox"/> YES 1 <input checked="" type="checkbox"/> | INC TAKE? NO 0 <input checked="" type="checkbox"/> YES 1 <input type="checkbox"/> | WEATHER CODE 02 | WIND SPEED 7 kn DIRECTION 45 ° | WAVE HEIGHT 1 ft | GEAR COND CODE 21 |
| HAUL INFO | DATE | TIME (24 hours) | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | | EST SOAK DUR | TARGET SPECIES CODE(S) | |
| H BEGIN | 06 / 26 / 01 | 05 : 16 | | | | | | 14 . 3 hrs | Weakfish | |
| A | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | | | | |
| U END | 06 / 26 / 01 | 06 : 03 | | 35 13.8 | | 75 32.8 | | | | |
| L | | | | | | | | | | |
| COMMENTS | | | | | | | WATER TEMP | NUMBER OF NETS | IF MM DETERRENTS USED: | |
| <p>Net set approximately 3 PM yesterday.</p> <p>Fishing in Hatteras Bight.</p> | | | | | | | 61 . 0 ° F | SET 2 | ACTIVE PASSIVE | |
| | | | | | | | | HAULED 2 | HAULED | |
| | | | | | | | | LOST 0 | LOST | |
| | | | | | | | | | | |

| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | |
|-------------------|------|------------|--------|------|--------|-----|---------|------|------------|--------|------|--------|-----|
| NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E |
| Weakfish | | K | 320 | 100 | R | E | | | | | | | |
| Bluefish | | K | 200 | 100 | R | E | | | | | | | |
| Northern Kingfish | | K | 25 | 100 | R | E | | | | | | | |
| Butterfish | | K | 8 | 100 | R | A | | | | | | | |
| Atl. Menhaden | | D | 10 | 001 | R | E | | | | | | | |
| Horseshoe Crab | | D | 12 | 001 | R | A | | | | | | | |
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NMFS FISHERIES OBSERVER PROGRAM

BEACH SEINE / BEACH ANCHORED HAUL LOG

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| OBS / TRIP ID | |
| DATE LAND (mm/yy) | / |
| PAGE # | OF |

| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS? NO 0 ____ YES 1 ____ | MM WATCH? NO 0 ____ YES 1 ____ | CATCH? NO 0 ____ YES 1 ____ | INC TAKE? NO 0 ____ YES 1 ____ | WEATHER CODE | WIND SPEED _____ kn DIRECTION _____ ° | | WAVE HEIGHT _____ ft | GEAR COND CODE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| HAUL INFO | DATE | TIME (24 hours) | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | | EST SOAK DUR | TARGET SPECIES CODE(S) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | BEGIN | / / | : | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | . hrs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| U | END | / / | : | 9960- | | 9960- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| COMMENTS | | | | | | | WATER TEMP | IF MM DETERRENTS USED: ACTIVE PASSIVE HAULED _____ LOST _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <table border="1"> <thead> <tr> <th colspan="2">SPECIES</th> <th>CATCH DISP</th> <th>POUNDS</th> <th>DISP</th> <th colspan="2">WEIGHT</th> <th colspan="2">SPECIES</th> <th>CATCH DISP</th> <th>POUNDS</th> <th>DISP</th> <th colspan="2">WEIGHT</th> </tr> <tr> <th>NAME</th> <th>CODE</th> <th>K / D</th> <th></th> <th>CODE</th> <th>D/R</th> <th>A/E</th> <th>NAME</th> <th>CODE</th> <th>K / D</th> <th></th> <th>CODE</th> <th>D/R</th> <th>A/E</th> </tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> | | | | | | | | | | | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | NAME | CODE | K / D | | CODE | D/R | A/E | NAME | CODE | K / D | | CODE | D/R | A/E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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PELAGIC DRIFT GILLNET GEAR CHARACTERISTICS LOG

This log contains detailed questions about the gear fished. Complete a new log for each uniquely configured gear (as defined below) **hauled** during a trip. These unique configurations may be based on variables such as net length, net color, mesh size, dropline length, *etc.* Any changes in these fields requires the completion of a new Pelagic Drift Gillnet Gear Characteristics Log. Number each gear configuration sequentially.

If the gear is set out and hauled more than once during a trip, or if two or more distinct gears are tied together for a haul, do not complete a new Pelagic Drift Gillnet Gear Characteristics Log for the multiple hauls or combined gears. Rather, record on the Pelagic Drift Gillnet Haul Log which gear numbers are being hauled. In addition, record any other information necessary to understand the manner in which the gear was set and/or hauled in COMMENTS ON METHODS OF SETTING OR HAULING GEAR.

If the vessel has two or more identical gears which are hauled separately, complete only one Pelagic Drift Gillnet Gear Characteristics Log and record the consecutively assigned numbers of all identical gears described in GEAR NUMBER(S) (#1). See the pelagic drift gillnet definitions below and GEAR NUMBER(S) (#1) for more information on defining and numbering gears.

If information is unavailable or unknown to any question except a “No/Yes” question, then record a dash (-) in the field. If the answer to a “No/Yes” question is unknown, record a “9” on the line next to the code for “No” to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered “No”, leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Pelagic Drift Gillnet: Vertical panel(s) of netting suspended in the water column which may be attached to free floating buoys and/or a high flier at one end, and tied off to the vessel at the other end. Large mesh netting is stretched between a floatline at the

top and a leadline at the bottom, and supported by vertical endlines, or up and down lines on each end. Panels of netting may be separated by a space or escape panel.

Net: A panel of netting which may be pieces of manufactured nets sewn together. The entire drift gillnet string may be referred to as “the net”.

Space or Escape Panel: A space between nets, continuous from the floatline to the leadline, that may be used to ease setting and hauling the gear. This space is only considered an escape panel if the captain indicates that the space is set intentionally for marine mammals or sea turtles to swim through.

Gear: A section of continuous netting of exactly the same characteristics between two endlines (up and down lines) that **may** have a space, or escape panel following it. For the purposes of this log, a net plus a space (if present) is synonymous with gear.

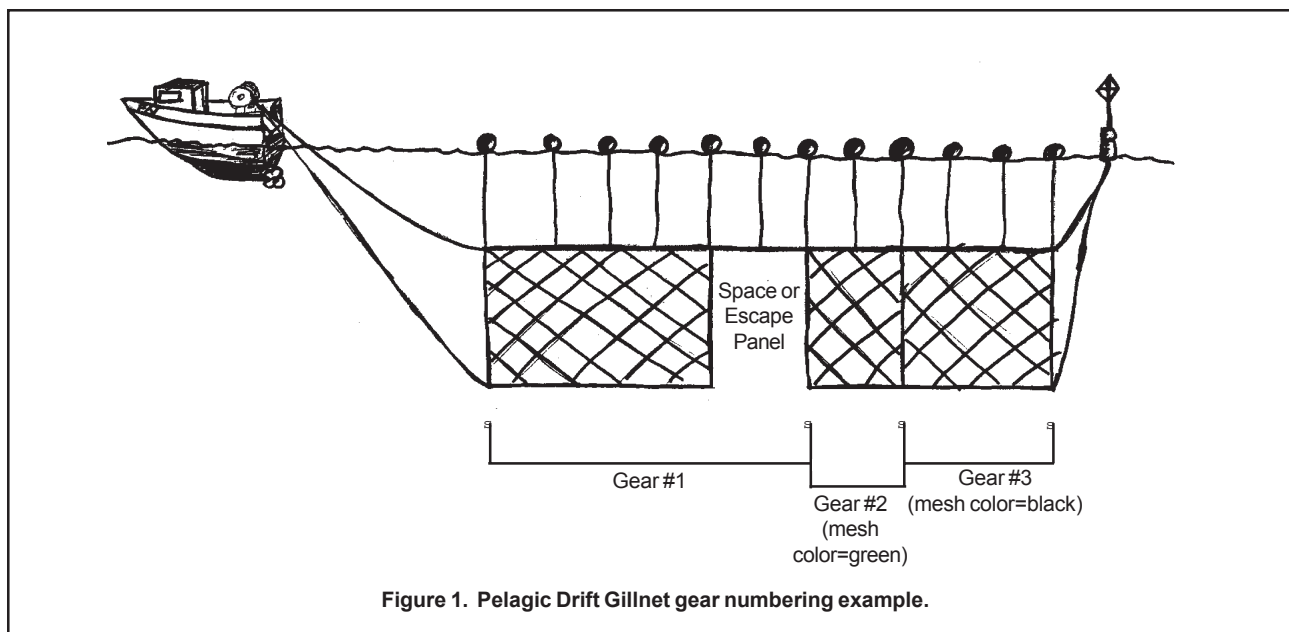
INSTRUCTIONS

For instructions on completing the Header fields **A, B and D** refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the consecutive number assigned to each uniquely configured gear hauled and for which characteristics are described. See the definition of gear in the introduction, and the illustration of the drift gillnet gears in Figure 1.

NOTE: Gears should be numbered consecutively according to the order in which they are hauled aboard the vessel. If two or more identical gears are used, assign consecutive numbers to each gear and record all of these numbers on one Pelagic Drift Gillnet Gear Characteristics Log.

(Reference Figure 1.) The first uniquely configured gear (closest to the vessel) is “1”, and its characteristics (including the space or escape panel) will be recorded on one Pelagic Drift Gillnet Gear Characteristics Log. The



next two gears are “2” and “3”, and their unique characteristics (as defined by the different colors of net webbing) will be recorded on a second and third Pelagic Drift Gillnet Gear Characteristics Log.

2. NETS STACKED?: Record whether nets in this gear are stacked by placing an “X” next to the appropriate code:

0 = No.

1 = Yes, describe or draw the configuration in OTHER COMMENTS.

NOTE: Nets are stacked if two panels of netting are sewn together vertically, one on top of the other, to intentionally fish “double deep.”

NOTE: If “Yes”, record each net in the stacked configuration on a separate Pelagic Drift Gillnet Gear Characteristics Log. The gear on “top” may have no leadline, while the “bottom” gear may have no floatline, droplines, or floats.

NET CHARACTERISTICS

3. LENGTH: Record, in whole feet, the horizontal distance of a net in this gear, as measured along the floatline. This information may be obtained from the

captain.

NOTE: If a space or escape panel follows a net, **do not** include this distance in the net length.

4. HEIGHT: Record, to the nearest tenth of a foot, the height of a net in this gear. This value is obtained by measuring the length of the endline, or up and down line, on the end of a net where the meshes are attached. This information may also be obtained from the captain.

5. MESH SIZE: Record, to the nearest hundredth of an inch, the mesh size used in a net in this gear. This information may be obtained from the captain.

6. MESH COUNT, VERTICAL: Record the number of vertical meshes of a net in this gear. This information may be obtained from the captain.

7. HANGING RATIO: Record the fractional ratio of the length of the floatline for one net to the length that the net would be if it was taken off the floatline and stretched out. This value can be calculated by counting 10 or 12 meshes horizontally, measuring the length of the floatline they are attached to, and comparing that distance to the stretched out length of the meshes. This information may be obtained from the captain.

Example: If the stretched out distance of the meshes is two times the length of the floatline, record "1/2".

8. TWINE SIZE NUMBER: Record the twine size number (industry standard) of the net webbing used in this gear. This information may be obtained from the captain. See Appendix Q. Conversion Tables for a listing of industry standard twine size numbers and their corresponding deniers, breaking strengths, and number of feet per pound.

9. NUMBER OF STRANDS: Record the number of strands of twine in the net webbing used in this gear. This information may be obtained from the captain.

Example: Monofilament has 1 strand.

10. MATERIAL: Record the material of the net webbing used in this gear by placing an "X" next to the appropriate code:

0 = Unknown.

1 = Nylon.

9 = Other, record the net webbing material on line 10A.

11. COLOR: Record the color of the net webbing used in this gear by placing an "X" next to the appropriate code:

00 = Unknown.

01 = Clear.

02 = White.

03 = Pink.

04 = Black.

05 = Green.

06 = Blue.

07 = Multi-color, record all colors on line 11A.

08 = Red.

99 = Other, record the color on line 11A.

NOTE: "Multi-color" = 07, if more than 1 color of net webbing is used in **one** net. For example, a section of black webbing is patched into the middle of an otherwise green gear.

GEAR CHARACTERISTICS

FLOATS

12. USED?: Record whether floats are used on this gear by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

13. NUMBER: Record an approximate **total** number of floats used on this gear. This number must include the number of floats across a space that may occur at the bridle at the end of a net. This information may be obtained from the captain.

14. DISTANCE BETWEEN: Record, in whole feet, the **average** distance along the floatline between the floats used on this gear.

DROPLINES

15. USED?: Record whether droplines are used in this gear by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

16. LENGTH: Record, in whole feet, the length of the droplines used in this gear. This length is the distance from the floats (at the water's surface) to the floatline. This information may be obtained from the captain.

SPACE OR ESCAPE PANEL

17. USED?: Record whether there is a continuous space or escape panel at the bridle following a net(s) by placing an "X" next to the appropriate code:

0 = No.

1 = Yes, describe or draw the space or escape panel in **COMMENTS ON DESCRIPTION OF SPACE OR ESCAPE PANEL.**

NOTE: A space or an escape panel is associated with the gear closest to the vessel. Do not count the lack of netting between the last gear and the highflyer as a space.

18. WIDTH: Record, to the nearest tenth of a foot, the width of the space or escape panel used between the nets in this gear.

LEADLINE

19. USED?: Record whether a leadline is used on this gear by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

20. WEIGHT: Record, in whole pounds, the **total** weight of the leadline used in this gear. Do **not** include the weight of any additional weights removed as this gear is hauled aboard the vessel. Include in comments any calculations used to determine this value.

NOTE: This value should **not** include any weight added for a net space (see following section and Figure 1) unless actual leadline material is used across the space.

ADDITIONAL WEIGHTS

21. USED?: Record whether any additional weights are used on the leadline of this gear by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

22. WEIGHT: Record, in whole pounds, the **total** weight of the additional weights used on the leadline of this gear. Do **not** include the weight of the leadline itself.

ACTIVE MARINE MAMMAL DETERRENT DEVICES

An “active” marine mammal deterrent device is a device which emits sound which may be detected by a marine mammal.

23. USED?: Record whether “active” marine mammal deterrent devices (*i.e.* pingers) were used on this gear when it was set by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

24. NUMBER: Record the number of active marine mammal deterrent devices (*i.e.* pingers) on the gear **when it was set**. This information can be obtained from the captain if the set is not observed.

PASSIVE MARINE MAMMAL DETERRENT DEVICES

A “passive” marine mammal deterrent device is a device which may provide reflection of marine mammal echolocation signals.

25. USED?: Record whether “passive” marine mammal deterrent devices were used on this gear when it was set by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

Example: Net material that is designed to be more acoustically visible to marine mammals.

26. NUMBER: Record the number of passive marine mammal deterrent devices on the gear **when it was set**. This information can be obtained from the captain if the set is not observed.

NOTE: If some or all of the nets in the gear are made from material that is designed to be more acoustically visible to marine mammals, record the **number of nets** within the gear made from this material.

ANCHOR

27. TIED TO VESSEL OR OTHER ANCHOR METHOD USED?: Record whether the gear is tied directly to the vessel, or another anchoring method is used on this gear by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

NOTE: If any gear in a particular set/haul is considered anchored, then all other gears in the same set/haul are also considered anchored.

28. WEIGHT: Record, in whole pounds, the **total** weight of the anchor(s) used to hold this gear in place.

This information may be obtained from the captain.

NOTE: If the gear is tied directly to the vessel and no other anchors are used, record "0".

29. WEIGHT - ACTUAL OR ESTIMATED:

Record whether the weight recorded in #28 is an actual or estimated weight by placing an "X" next to the appropriate code:

- 1 = Actual.
- 2 = Estimated.

NOTE: If the gear is tied directly to the vessel and no other anchors are used, leave this field blank.

30. METHOD: Record the method used to anchor this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Tied to Vessel Only.
- 2 = Anchored Only.
- 3 = Tied to the Vessel and Anchored.
- 9 = Other, record the anchor method on line 30A.

COMMENTS

COMMENTS ON DESCRIPTION OF SPACE OR ESCAPE PANEL:

Describe the location of the space or escape panel and indicate whether the captain uses this space between the nets for the efficiency of setting or hauling of the gear, or for marine mammals or sea turtles to swim through. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log.

NOTE: If "Yes" is recorded for SPACE OR ESCAPE PANEL USED? (#17), comments must be recorded here.

Example: "Although there is no designated escape panel in the net, when nets are set together, there is an approximate 100' space between them. The captain says this space is for hauling purposes only."

COMMENTS ON METHODS OF SETTING OR HAULING GEAR:

Describe the gear and procedures used to set and/or haul this gear. Describe whether the net is hauled directly onto a net reel, along the side of the vessel, or by some other method. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log.

Examples: "Gear is set and hauled directly off the net reel, and mending is done during haulback."

"Gear is set from the stern with the net drum, and hauled at the stern, through level wind, onto the net drum."

OTHER COMMENTS:

Record any additional information about this gear. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

**NMFS FISHERIES OBSERVER PROGRAM
PELAGIC DRIFT GILLNET GEAR LOG**

| | |
|-------------------|------------|
| OBS/ TRIP ID | A |
| DATE LAND (mm/yy) | B / |

| GEAR NUMBER(S) | GEAR CODE | NETS STACKED ? | | |
|------------------------------|-----------|-----------------------------------|---------------------------|--|
| 1 | D | 2 NO 0 YES 1 | | |
| NET CHARACTERISTICS: | | USED? NO YES | MEASUREMENTS | |
| LENGTH 3 ft | | FLOATS 12 0 1 | Number 13 | |
| HEIGHT 4 ft | | | Dist Between 14 ft | |
| MESH SIZE 5 in | | DROPLINES 15 0 1 | Length 16 ft | |
| MESH COUNT VERTICAL 6 | | SPACE OR 17 | Width 18 ft | |
| HANGING RATIO 7 / | | ESCAPE PANEL 0 1 | Weight 20 lbs | |
| TWINE SIZE 8 | | LEADLINE 19 0 1 | Weight 22 lbs | |
| # STRANDS 9 | | ADDITIONAL 21 | | |
| NET MATERIAL 10 | | WTS 0 1 | Weight 22 lbs | |
| Unknown 0 | | MM DETERRENT DEVICES | | |
| Nylon 1 | | ACTIVE 23 0 1 | Number 24 | |
| Other 9 | | PASSIVE 25 0 1 | Number 26 | |
| 10A | | TIED TO VESSEL OR OTHER 27 | | |
| NET COLOR 11 | | ANCHOR METHOD 0 1 | Weight 28 lbs | |
| Unknown 00 | | | Actual 29 1 | |
| Clear 01 | | | Estimated 2 | |
| White 02 | | | | |
| Pink 03 | | | | |
| Black 04 | | | | |
| Green 05 | | | | |
| Blue 06 | | | | |
| Multi-color 07 | | | | |
| Red 08 | | | | |
| Other 99 | | | | |
| 11A | | | | |
| | | ANCHOR METHOD 30 | | |
| | | Unknown 0 | | |
| | | Tied to Vessel Only 1 | | |
| | | Anchored Only 2 | | |
| | | Tied & Anchored 3 | | |
| | | Other 9 | | |
| | | 30A | | |

(diagram for reference only)

The diagram illustrates the structure of a pelagic drift gillnet. It shows a horizontal line of floats at the top, connected by a dropline. Below the dropline are two rectangular net panels, each labeled 'NET'. Between the two net panels is a 'Space or Escape Panel'. The vertical distance from the dropline to the bottom of the net panels is labeled 'Net Height'. The bottom of the net panels is connected by a line labeled 'Lead Line'. The entire assembly is labeled 'GEAR'.

COMMENTS ON DESCRIPTION OF SPACE OR ESCAPE PANEL

COMMENTS ON METHODS OF SETTING OR HAULING GEAR

OTHER COMMENTS

**NMFS FISHERIES OBSERVER PROGRAM
PELAGIC DRIFT GILLNET GEAR LOG**

| | |
|-------------------|---------|
| OBS/ TRIP ID | B98045- |
| DATE LAND (mm/yy) | 10 / 01 |

| GEAR NUMBER(S) | GEAR CODE | NETS STACKED ? | |
|-----------------------------|--|--|--|
| 1 | 115 | NO 0 <input checked="" type="checkbox"/> | YES 1 <input type="checkbox"/> |
| NET CHARACTERISTICS: | | USED? | MEASUREMENTS |
| LENGTH | 4338 ft | FLOATS | 0 <input type="checkbox"/> 1 <input checked="" type="checkbox"/> |
| HEIGHT | 123.3 ft | | Number 43 |
| MESH SIZE | 22.0 in | | Dist Between 100 ft |
| MESH COUNT | | DROPLINES | 0 <input type="checkbox"/> 1 <input checked="" type="checkbox"/> |
| VERTICAL | 70 | | Length 30 ft |
| HANGING | | SPACE OR | |
| RATIO | 1 / 3 | ESCAPE PANEL | 0 <input type="checkbox"/> 1 <input checked="" type="checkbox"/> |
| TWINE SIZE | 30 | | Width 55.0 ft |
| # STRANDS | 3 | LEADLINE | 0 <input type="checkbox"/> 1 <input checked="" type="checkbox"/> |
| | | | Weight 470 lbs |
| NET MATERIAL | | ADDITIONAL | |
| Unknown | 0 <input type="checkbox"/> | WTS | 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> |
| Nylon | 1 <input checked="" type="checkbox"/> | | Weight <input type="text"/> lbs |
| Other | 9 <input type="checkbox"/> | MM DETERRENT DEVICES | |
| | | ACTIVE | 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> |
| | | | Number <input type="text"/> |
| | | PASSIVE | 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> |
| | | | Number <input type="text"/> |
| | | TIED TO VESSEL OR OTHER | |
| NET COLOR | | ANCHOR METHOD | |
| | | | 0 <input type="checkbox"/> 1 <input checked="" type="checkbox"/> |
| | | | Weight 0 lbs |
| Unknown | 00 <input type="checkbox"/> | | Actual 1 <input type="checkbox"/> |
| Clear | 01 <input type="checkbox"/> | | Estimated 2 <input type="checkbox"/> |
| White | 02 <input type="checkbox"/> | ANCHOR METHOD | |
| Pink | 03 <input type="checkbox"/> | Unknown | 0 <input type="checkbox"/> |
| Black | 04 <input type="checkbox"/> | Tied to Vessel Only | 1 <input checked="" type="checkbox"/> |
| Green | 05 <input type="checkbox"/> | Anchored Only | 2 <input type="checkbox"/> |
| Blue | 06 <input type="checkbox"/> | Tied & Anchored | 3 <input type="checkbox"/> |
| Multi-color | 07 <input type="checkbox"/> | Other | 9 <input type="checkbox"/> |
| Red | 08 <input checked="" type="checkbox"/> | | |
| Other | 99 <input type="checkbox"/> | | |

(diagram for reference only)

The diagram illustrates the gear layout. At the top, floats are connected by a dropline. Below the dropline is a space or escape panel, which is a rectangular area between two net sections. The net sections are labeled 'NET' and are connected by a lead line. The diagram also shows the waterline, float line, end line, and net height.

GEAR

COMMENTS ON DESCRIPTION OF SPACE OR ESCAPE PANEL

Space is designed to aid in hauling the gear.

Captain does not consider it an escape panel.

COMMENTS ON METHODS OF SETTING OR HAULING GEAR

Gear is set and hauled by hand.

OTHER COMMENTS

LL Wgt: 65 lbs/ 600 ft: 50/600 x 4338 ~470 lbs

**NMFS FISHERIES OBSERVER PROGRAM
 PELAGIC DRIFT GILLNET GEAR LOG**

| | |
|-------------------|---|
| OBS/ TRIP ID | |
| DATE LAND (mm/yy) | / |

| GEAR NUMBER(S) | GEAR CODE | NETS STACKED ? | NO 0 ____ YES 1 ____ | | |
|-----------------------------|--------------|---------------------------|----------------------|------------|-----------------------|
| NET CHARACTERISTICS: | | USED? | NO | YES | MEASUREMENTS |
| LENGTH | ____ ft | FLOATS | 0 ____ 1 ____ | | Number _____ |
| HEIGHT | ____.____ ft | | | | Dist Between _____ ft |
| MESH SIZE | ____.____ in | DROPLINES | 0 ____ 1 ____ | | Length _____ ft |
| MESH COUNT | | SPACE OR | | | |
| VERTICAL | _____ | ESCAPE PANEL | 0 ____ 1 ____ | | Width _____ ft |
| HANGING | | LEADLINE | 0 ____ 1 ____ | | Weight _____ lbs |
| RATIO | ____/____ | ADDITIONAL | | | |
| TWINE SIZE | _____ | WTS | 0 ____ 1 ____ | | Weight _____ lbs |
| # STRANDS | _____ | MM DETERRENT DEVICES USD? | | | |
| NET MATERIAL | | ACTIVE | 0 ____ 1 ____ | | Number _____ |
| Unknown | 0 ____ | PASSIVE | 0 ____ 1 ____ | | Number _____ |
| Nylon | 1 ____ | TIED TO VESSEL OR OTHER | | | |
| Other | 9 ____ | ANCHOR METHOD | 0 ____ 1 ____ | | Weight _____ lbs |
| NET COLOR | | | | | Actual 1 ____ |
| Unknown | 00 ____ | | | | Estimated 2 ____ |
| Clear | 01 ____ | ANCHOR METHOD | | | |
| White | 02 ____ | Unknown | 0 ____ | | |
| Pink | 03 ____ | Tied to Vessel Only | 1 ____ | | |
| Black | 04 ____ | Anchored Only | 2 ____ | | |
| Green | 05 ____ | Tied & Anchored | 3 ____ | | |
| Blue | 06 ____ | Other | 9 ____ | | _____ |
| Multi-color | 07 ____ | | | | |
| Red | 08 ____ | | | | |
| Other | 99 ____ | | | | |

(diagram for reference only)

The diagram illustrates the structure of a pelagic drift gillnet. It shows a horizontal line of floats connected by a dropline. Below the dropline are two rectangular net panels, each labeled 'NET'. Between the two net panels is a 'Space or Escape Panel'. The vertical distance from the dropline to the bottom of the net panels is labeled 'Net Height'. The bottom of the net panels is connected by a line labeled 'End Line'. The top of the net panels is connected by a line labeled 'Lead Line'. The entire gear is labeled 'GEAR'.

COMMENTS ON DESCRIPTION OF SPACE OR ESCAPE PANEL

COMMENTS ON METHODS OF SETTING OR HAULING GEAR

OTHER COMMENTS

PELAGIC DRIFT GILLNET HAUL LOG

This log contains detailed questions about the setting and hauling of gear, and the haul's catch. Complete a new log after each hauling of gear. If you feel that you cannot go on deck for weather related safety reasons, record as much information on this log as possible (*i.e.* Header Information, weather, depths, times, positions, *etc.*).

For all pelagic species (*i.e.* swordfish, billfish, tuna, sharks, *etc.*), sturgeons, rays or tagged fish caught in this haul, an Individual Animal Log must be completed to provide information on each animal caught by the gear. This Pelagic Drift Gillnet Haul Log will serve as a cover sheet for any Individual Animal Log(s) corresponding to this haul that may follow. In general, most animals caught by this gear will be recorded on an Individual Animal Log. Only dressed parts of pelagic species, such as shark fins and fish chunks, belong in the Species Information section of this log. All marine mammals, sea turtles, and sea birds must be recorded on a Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

If there are insufficient lines on one form for all species caught in this haul, continue listing species on an additional Pelagic Drift Gillnet Haul Log, making sure to complete all of the Header Information (A-C) and HAUL NUMBER (E).

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that a field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Set Begin: First component of pelagic drift gillnet deployed.

Set End: Pelagic drift gillnet secured to anchoring device, or completely deployed.

Haul Begin: Hauling equipment put into gear.

Haul End: Pelagic drift gillnet completely retrieved and aboard vessel.

INSTRUCTIONS

For instructions on completing fields **A-W**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the gear number used for this haul as uniquely identified on the appropriate Pelagic Drift Gillnet Gear Characteristics Log.

2. GEAR CONDITION: Indicate the condition of the gear at haulback, even if this was the condition of the gear when set, by recording the most appropriate two digit code listed below, and in Appendix J. Gear Condition Codes:

- 00 = Unknown.
- 31 = No gear damage, or very few small, scattered holes.
- 32 = Less than 5% of the net torn.
- 33 = Between 5% and 25% of the net torn.
- 34 = Between 25% and 50% of the net torn.
- 35 = Greater than 50% of the net torn.
- 39 = Net totally balled up.
- 99 = Other, specify in COMMENTS .

3. BEGIN/END DATE: Record the month, day, and year, based on local time, that this set began and ended. Record the month, day, and year, based on local time, that this haul began and ended.

4. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000-2359), that this set began and ended, *i.e.* when the first component of the pelagic drift gillnet is deployed (Set Begin), and when the pelagic drift gillnet is secured to an anchoring device, or completely deployed (Set End). Record the local time, using the 24 hour clock (0000-2359), that this haul began and ended, *i.e.* when the hauling equipment is put into gear (Haul Begin), and when the pelagic drift gillnet is completely retrieved and aboard the vessel (Haul End).

5. BEGIN/END WATER TEMPERATURE:

Record, to the nearest tenth of a degree Fahrenheit, the surface water temperature when this set began and ended. Record, to the nearest tenth of a degree Fahrenheit, the surface water temperature when this haul began and ended.

NOTE: Use a “ScoopMaster” thermometer to obtain these temperatures.

NOTE: If these temperatures are obtained in Celsius, use Appendix Q. Conversion Tables to convert them to Fahrenheit.

NUMBER OF MARINE MAMMAL DETERRENT DEVICES**ACTIVE:**

An “active” marine mammal deterrent device is a device which emits sound which may be detected by a marine mammal.

6. HAULED: Record the number of active marine mammal deterrent devices (*i.e.* pingers) on the gear as it is hauled. This number should agree with the number recorded in NUMBER OF ACTIVE MARINE MAMMAL DETERRENT DEVICES USED on the corresponding Pelagic Drift Gillnet Gear Characteristics Log(s).

NOTE: If gear is partially hauled, record the number of marine mammal deterrent devices **only on** the portion of gear hauled.

NOTE: If “pingers” are used on the gear, record them on the Individual Animal Log as they are brought onboard.

NOTE: These numbers should reflect the number of these devices on the gear regardless of whether or not it is believed these devices are actually working. Information of this nature should be recorded in COMMENTS.

7. LOST: Record the number of active marine mammal deterrent devices (*i.e.* pingers) lost from this set. If this number differs from NUMBER OF ACTIVE MARINE MAMMAL DETERRENT DEVICES USED minus NUMBER OF ACTIVE MARINE MAMMAL DETERRENT DEVICES HAULED, then record the reason(s) in COMMENTS.

NOTE: Do not include devices not seen because gear was partially hauled.

PASSIVE:

A “passive” marine mammal deterrent device is a device which may provide reflection of marine mammal echolocation signals.

8. HAULED: Record the number of passive marine mammal deterrent devices on the gear as it is hauled. This number should agree with the number recorded in NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES USED on the corresponding Pelagic Drift Gillnet Gear Characteristics Log(s).

Example: Net material that is designed to be more acoustically visible to marine mammals.

NOTE: If some or all of the nets in the gear are made from material that is designed to be more acoustically visible to marine mammals, record the **number of nets** within the gear made from this material.

NOTE: If gear is partially hauled, record the number of marine mammal deterrent devices **only on** the portion of gear hauled.

9. LOST: Record the number of passive marine mammal deterrent devices lost from this set. If this number differs from NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES USED minus NUMBER OF PASSIVE MARINE MAMMAL DETERRENT DEVICES HAULED, then record the reason(s) in COMMENTS.

NOTE: Do not include in this field devices not seen because gear was partially hauled.

10. DEPTH RANGE, LEADLINE: Record, in whole fathoms, the range of depths (shallowest to deepest) from the surface, at which the leadline fishes for this haul. This range may be calculated by adding the gear dropline length(s) to the net height.

LIGHT STICKS

11. USED?: Record whether chemical light sticks are used on the gear in this haul by placing an “X” next to the appropriate code:

- 0 = No.
- 1 = Yes.

12. NUMBER: Record the number of chemical light sticks used on the gear in this haul.

13. SET METHOD: Record the method that best describes the manner in which the gear for this haul was set by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Temperature.
- 02 = Bottom Contours (*i.e.* depth).
- 03 = Compass/ Loran.
- 04 = Tide/ Current.
- 05 = Visual (*i.e.* echosounder, surface feeding).
- 06 = Eddy.
- 98 = Mixed, (more than one code applies) record all set methods on line 13A.
- 99 = Other, record the set method(s) on line 13A.

COMMENTS

Record any additional information regarding this haul, *i.e.* unusual species caught, or gear "parting" during haulback. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

01/01/01

OBGPH, OBHAU, OBSPP

NMFS FISHERIES OBSERVER PROGRAM

PELAGIC DRIFT GILLNET HAUL LOG

| | |
|-------------------|-------------|
| OBS/TRIP ID | A |
| DATE LANDED mm/yy | B / |
| PAGE # | C of |

| GEAR CODE D | GEAR NUMBER(S) 1 | HAUL # E | HAUL OBS ? F NO 0 ____ YES 1 ____ | CATCH ? G NO 0 ____ YES 1 ____ | INC TAKE ? H NO 0 ____ YES 1 ____ | WEATHER CODE I | WIND SPEED J kn DIRECTION K ° | | WAVE HEIGHT L ft | DEPTH, HAUL BEGIN M fm | GEAR COND CODE 2 |
|-----------------------|----------------------------|--------------------|---|--|---|-----------------------------|---|---|---|--|-------------------------------|
| SET/HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TEMP fahrenheit | IF MM DETERRENTS USED: ACTIVE PASSIVE | | DEPTH RANGE, LEADLINE 10 — fm | |
| S E T | BEGIN / 3 / | 4 : | Station 1 | LATITUDE / Bearing N | Station 2 | LONGITUDE / Bearing | 5 . ° | NUMBER HAULED 6 8 | | TARGET SPECIES CODE O P | |
| H A U L | BEGIN / / | : | | | | | . ° | NUMBER LOST 7 9 | | SET METHOD 13 | |
| COMMENTS | | | | | | | LIGHT STICKS USED ? | | Unknown 00 ____ | | |
| | | | | | | | NO 0 ____ 11 NUMBER YES 1 ____ 12 | | Temperature 01 ____ Bottom Contours 02 ____ Compass / Loran 03 ____ Tide / Current 04 ____ Visual 05 ____ Eddy 06 ____ Mixed 98 ____ Other 99 ____ 13A | | |

| SPECIES | | CATCH DISP K / D | POUNDS | DISP CODE | WEIGHT | |
|----------|----------|---------------------|----------|--------------|----------|----------|
| NAME | CODE | | | | D/R | A/E |
| Q | R | S | T | U | V | W |
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**NMFS FISHERIES OBSERVER PROGRAM
PELAGIC DRIFT GILLNET HAUL LOG**

| | |
|-------------------|---------|
| OBS/TRIP ID | B98045- |
| DATE LANDED mm/yy | 10/01 |
| PAGE # | 1 of 4 |

| | | | | | | | | | | | |
|--|------------------------------|--------------------|---|--|---|---------------------------|---|--|----------------------------|------------------------------------|-----------------------------|
| GEAR CODE 115 | GEAR NUMBER(S) 1,2 | HAUL # 8 | HAUL OBS ? NO 0 ____ YES 1 <u>X</u> | CATCH ? NO 0 ____ YES 1 <u>X</u> | INC TAKE ? NO 0 ____ YES 1 <u>X</u> | WEATHER CODE 02 | WIND SPEED 15 kn DIRECTION 280 ° | | WAVE HEIGHT 2 ft | DEPTH, HAUL BEGIN 400 fm | GEAR COND CODE 32 |
| SET/HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXX) | | | | TEMP fahrenheit | IF MM DETERRENTS USED: ACTIVE PASSIVE | | DEPTH RANGE, LEADLINE | |
| S | BEGIN | 10 / 13 / 01 | 18 : 30 | Station 1 | LATITUDE / Bearing | Station 2 | LONGITUDE / Bearing | 68.6 ° | NUMBER HAULED | | 25 _ 26 fm |
| E | END | 10 / 13 / 01 | 20 : 45 | | 40 21.2 | | 67 30.5 | 64.3 ° | | | TARGET SPECIES CODE |
| H | BEGIN | 10 / 14 / 01 | 05 : 30 | | 40 22.1 | | 67 28.6 | 62.3 ° | NUMBER LOST | | SWORDFISH |
| A | END | 10 / 14 / 01 | 09 : 34 | | 40 22.7 | | 67 30.1 | 62.5 ° | | | SET METHOD |
| U | END | 10 / 14 / 01 | 09 : 34 | | 40 21.8 | | 67 32.0 | | | | Unknown 00 ____ |
| COMMENTS Incidental take of 2 risso's dolphins, D01254 & D01253. Total of 7 swordfish, 8 Makos, and 3 yellowfin tunas for the haul. Holes from basking shark. | | | | | | | | LIGHT STICKS USED ? | | Temperature 01 <u>X</u> | |
| | | | | | | | | NO 0 ____ NUMBER | | Bottom Contours 02 ____ | |
| | | | | | | | | YES 1 <u>X</u> 50 | | Compass / Loran 03 ____ | |
| | | | | | | | | | | Tide / Current 04 ____ | |
| | | | | | | | | | | Visual 05 ____ | |
| | | | | | | | | | | Eddy 06 ____ | |
| | | | | | | | | | | Mixed 98 ____ | |
| | | | | | | | | | | Other 99 ____ | |

| SPECIES | | CATCH DISP K / D | POUNDS | DISP CODE | WEIGHT | |
|------------------|------|---------------------|--------|--------------|--------|-----|
| NAME | CODE | | | | D/R | A/E |
| Mako Shark, Fins | | K | 25 | 100 | D | E |
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| DATE LANDED mm/yy | / |
| PAGE # | of |

1

LOGLINE GEAR CHARACTERISTICS LOG

This log contains detailed questions about the gear fished; use it to document the use and configuration of all hook and line gears. This includes longline gear as well as other line fishing methods not commonly used, but periodically deployed (e.g. rod and reel, handline, troll line). There are differences in the protocols for recording the characteristics of longline gear compared with other line fishing gears.

Demersal Longline (Bottom Longline, Tub Trawl)

Changes in gear configuration (i.e. number of hooks, number of floats, distance between gangions, mainline material, *etc.*) requires the completion of a new Longline Gear Characteristics Log.

Pelagic Longline

Changes in numbers of items used such as hooks and floats are factored into the estimated average and do not require a separate Longline Gear Characteristics Log. A change in gear configuration (i.e. use of light sticks, hooks between floats or fishing depth) towards another target species does require the completion of a new Longline Gear Characteristics Log.

Example: The first two hauls use gears ("strings") with light sticks and target swordfish. Number these gears "1" and record their characteristics on a single Longline Gear Characteristics Log. The remaining five hauls do not use lightsticks and target big-eye tuna. Complete a second gear log numbered gear number "2".

Other Line Fishing Gears

For other line fishing gears, complete only the following fields on the Longline Gear Characteristics Log; A, B, D, 1, 2, 5-9, 16-18, 30-33. For these gears, assign each separate physical gear its own gear number. If there are physical gears with the same configuration used, complete only one Longline Gear Characteristics Log and record the consecutively assigned numbers of all gears with the same configuration.

If a gear is set out and hauled more than once during a trip, do not complete a new Longline Gear Characteristics Log for the multiple hauls. Rather,

record on the Longline Haul Log, which gear number is being hauled.

In addition, record any other information necessary to understand the manner in which the gear was set/hauled in COMMENTS.

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9", on the line next to the code for "No" to indicate that the field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Handline: A weight, leader, and at least one hook that may be baited, attached to a line. Handlines are not always held during fishing (e.g. rod and reel).

Troll line: One or more lines with hooks and bait or lures attached, that are towed behind a moving boat.

Longline: A mainline ("the string") with spaced gangion lines attached which have baited hooks on the free end. The mainline is divided into sections of hook and float arrangements which are distinguished by a high flyer, radio beacon, or beeper buoy. **This may include multiple "tubs" of gear tied together.**

Section: Each portion of the entire longline string beginning with a high flyer, radio beacon, or beeper buoy and ending with the next high flyer, radio beacon, or beeper buoy.

Dropline: A line that connects the floats on the water's surface to the mainline. This may also be called a floatline and is not generally used in the Northeast demersal longline fishery.

Gangion: A line and hook attached to the mainline. Gangions may vary in length and have up to 2 swivels, one below an AK snap (if present) and possibly another one above the hook. Fishermen may sometimes refer to these as leaders.

Leader: A relatively short section of mono or steel wire placed between a swivel and the hook. It reduces bite offs, makes hook replacement easier and helps to maintain gangion length. **Leader lengths should not be included in any gangion measurements.**

DEMERSAL LONGLINE

Gear: A longline string composed of one or more "tubs", uniquely configured for a specific target species.

Example: See GEAR NUMBER (#1).

PELAGIC LONGLINE

Gear: A longline string composed of several sections and supported in the water column by various sized floats, uniquely configured for a specific target species.

ROD AND REEL and TROLLED GEARS

Gear: An individual line with hooks and bait attached.

INSTRUCTIONS

For instructions on completing the Header Fields **A**, **B**, and **D**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the consecutive number assigned to each uniquely configured gear hauled and for which characteristics are described. See the introduction and definitions for more information on defining and numbering gears.

Example: There are 5 rod and reels on the vessel, 4 of which are identical. The 5th rod and reel has one additional hook. This would require the completion of 2 separate gear characteristic logs, one for gear #'s 1, 2, 3, and 4 and one for gear # 5.

Example: If there are 3 longline strings and 2 rod and reels the proper way of numbering these gears is #'s 1 - 5 (i.e. there should only be **ONE** gear # 1)

2. NUMBER OF HOOKS: Record the **TOTAL** number of individual hooks set in this gear.

3. NUMBER OF SECTIONS: Record the number of sections in this gear.

NOTE: In the demersal longline fishery one section may consist of several "tubs" of gear tied together.

4. SECTION LENGTH: Record the average length of a section in this longline gear to the nearest tenth of a nautical mile. This value can be calculated by dividing the average mainline length by the average NUMBER OF SECTIONS (#3) fished.

MAINLINE

5. NUMBER OF STRANDS: Record the number of strands used in the mainline material.

NOTE: If "multi-strand" and the strands are not counted then record a dash (-) and COMMENT.

6. DIAMETER: Record, to the nearest tenth of a millimeter, the diameter of the mainline.

7. TEST: Record, in whole pounds, the test, or dry breaking strength, of the mainline. This information may be obtained from the captain.

8. MATERIAL: Record the material of the mainline by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Monofilament Nylon.
- 2 = Cotton.
- 3 = Steel Wire.
- 9 = Other, record the mainline material on line 8A.

9. COLOR: Record the color of the mainline by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Clear.
- 02 = White.
- 03 = Pink.
- 04 = Black.
- 05 = Green.
- 06 = Blue.
- 07 = Multi-color, record all mainline colors on line 9A.
- 08 = Red.
- 99 = Other, record the mainline color on line 9A.

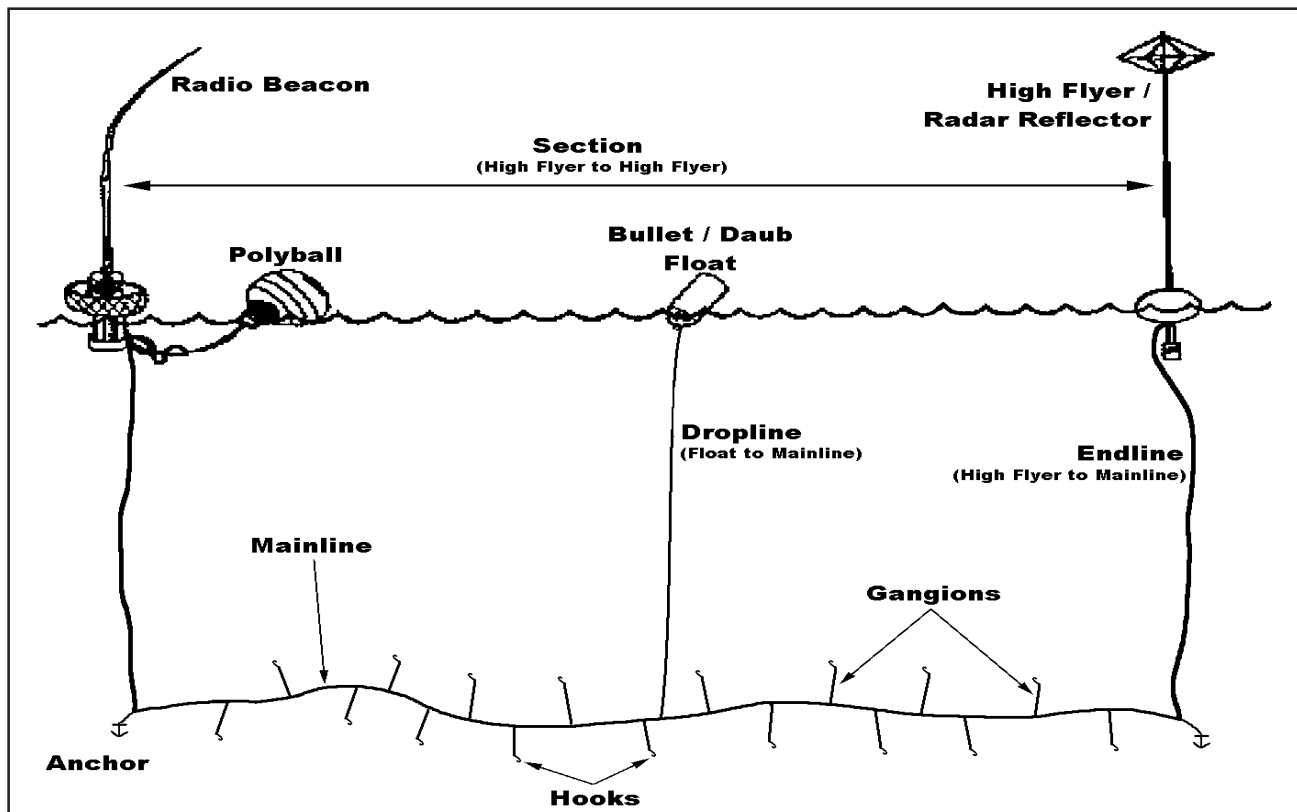


Figure 1. Characteristics of demersal and/or pelagic longline fishing gear.

FLOATS

10. USED?: Record whether floats of each type listed (unknown, polyball, bullet/daub and other), are used on this gear by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

NOTE: If "other" float types are used, record the float type(s) in COMMENTS.

11. NUMBER: Record the number of each float type used.

12. AVERAGE NUMBER OF HOOKS BETWEEN: Record the average number of hooks between each float type used.

NOTE: If floats are only used at the beginning and the end of the string then this value should equal the total NUMBER OF HOOKS (#2).

ANCHOR

13. USED?: Record whether any anchor(s) is (are)

used on this gear by placing an "X" next to the appropriate code:

0 = No.

1 = Yes.

14. WEIGHT: Record, in whole pounds, the **total** weight of the anchor(s) used to hold this gear in place. This information may be obtained from the captain.

15. WEIGHT - ACTUAL OR ESTIMATED: Record whether the weight recorded in #14 is an actual or estimated weight by placing an "X" next to the appropriate code:

1 = Actual.

2 = Estimated.

HOOKS

NOTE: Primary describes the most used hook type, and secondary describes the second most used hook type.

16. BRAND: Record the brand names of the primary and secondary hooks used in this gear. This information may usually be found on the box in which

the hooks were purchased, or obtained from the captain. If there is no secondary hook type used, record a dash (-). If there is a third hook type used, record its brand in COMMENTS.

Example: Mustad®; see Figure 2.

17. MODEL/PATTERN NUMBER: Record the model or pattern number of the primary and secondary hooks used in this gear. This information may usually be found on the box in which the hooks were purchased, or obtained from the captain. If there is no secondary hook type used, record a dash (-). If there is a third hook type used, record its model/pattern number in COMMENTS.

Example: 39963WS.

NOTE: If possible record the hook type (circle hook, J-hook, etc.) in COMMENTS.

18. SIZE: Record the size of the primary and secondary hooks used in this gear. This information may usually be found on the box in which the hooks were purchased, or obtained from the captain. If there is no secondary hook type used, record a dash (-). If there is a third hook type used, record its size in COMMENTS.

Example: 13/0.

DROPLINES

NOTE: In the demersal longline fishery droplines are not typically used.

19. LENGTH: Record, in whole feet, the average length of the droplines used in this gear. This information may be obtained from the captain. If droplines are not used record a dash (-).

20. DISTANCE BETWEEN: Record, to the nearest foot, the distance between droplines.

21. NUMBER OF RADIO BEACONS: Record the number of radio beacons. These may also be called "radio buoys" or "beepers".

22. NUMBER OF RADAR REFLECTORS: Record the number of radar reflectors. These may also be called "high flyers".

GANGIONS

23. DISTANCE BETWEEN: Record, in whole feet,

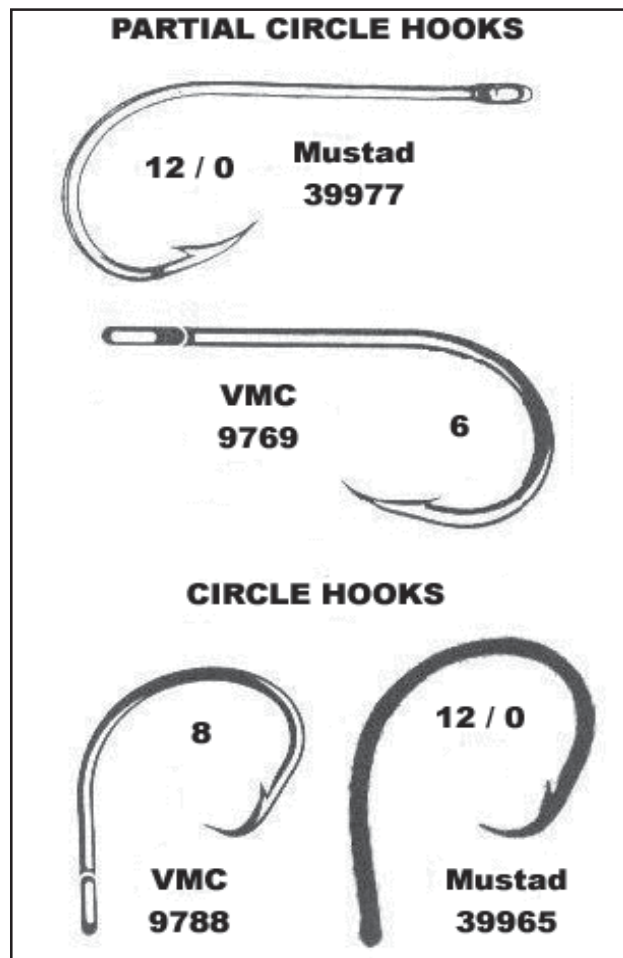


Figure 2. Common hook types seen in Northeast demersal longline fishery.

the **average** distance along the mainline between gangions used in this gear. This information may be obtained from the captain.

24. DIAMETER: Record, to the nearest tenth of a millimeter, the diameter of the gangions used in this gear. This information may be obtained from the captain.

25. TEST: Record, in whole pounds, the test, or dry breaking strength, of the gangions used in this gear.

26. LENGTH: Record, to the nearest foot, the lengths of the gangions, for up to two different lengths. If there are more than two different lengths of gangions used, record the other lengths in COMMENTS. Gangion length does not include the leader length.

27. COUNT: Record the number of gangions for each length used.

28. MATERIAL: Record the material of the gangions, by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Monofilament Nylon.
- 2 = Cotton.
- 9 = Other, record the gangion material on line 28A.

29. COLOR: Record the color of the gangions used in this gear by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Clear.
- 02 = White.
- 03 = Pink.
- 04 = Black.
- 05 = Green.
- 06 = Blue.
- 08 = Red.
- 98 = Combination, record all gangion colors on line 29A.
- 99 = Other, record the gangion color on line 29A.

LEADERS

30. USED?: Record whether leaders are used between the gangions and the hooks by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

31. LENGTH: Record, in whole feet, the length of the leaders used in this gear.

32. TEST: Record, in whole pounds, the test, or dry breaking strength, of the leaders used in this gear. This information may be obtained from the captain.

33. MATERIAL: Record the material of the leaders used in this gear by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Monofilament Nylon.
- 3 = Steel Wire.
- 9 = Other, record the leader material on line 33A.

SWIVELS

34. SWIVELS USED?: Indicate whether swivels are used on the gangions by placing a "X" next to the appropriate code:

- 0 = No
- 1 = Yes

35. NUMBER OF SWIVELS PER GANGION: Record the number of swivels used per gangion. One is generally located below the AK-SNAP and if leader is used, another swivel will also be used.

Example: 1 swivel per 1 gangion should be written as 1 / 1.

LIGHT STICKS

36. USED?: Record whether light sticks are used on this gear by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

37. COLOR: Record the color of the light sticks used on this gear by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 02 = White.
- 03 = Pink.
- 05 = Green.
- 06 = Blue.
- 08 = Red.
- 09 = Orange.
- 10 = Purple.
- 98 = Combination, record all colors on line 37A.
- 99 = Other, record the light stick color on line 37A.

38. NUMBER OF LIGHTSTICKS: Record the average number of lightsticks used on this gear.

COMMENTS

Record any additional information about this gear. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM
LONGLINE GEAR CHARACTERISTICS LOG

| | | | | | | | | | | | |
|--------------------|--|--|--|----------------------------|--|------------------|--|---------------------------|--|-----------------|--|
| GEAR CODE * | | | | GEAR NUMBER(S)* | | NUMBER OF HOOKS* | | NUMBER OF SECTIONS | | SECTION LENGTH | |
| D | | | | 1 | | 2 | | 3 | | 4 . nm | |
| MAINLINE * | | | | FLOATS | | | | ANCHOR USED? | | HOOKS * | |
| 5 | | | | | | | | 1 3 | | | |
| # OF STRANDS _____ | | | | COLOR _____ | | | | NO 0 ____ YES 1 ____ | | MODEL/ | |
| 6 | | | | Unknown 00 ____ | | | | 1 4 | | BRAND _____ | |
| DIAMETER _____ mm | | | | Clear 01 ____ | | | | WEIGHT _____ lbs | | PATTERN _____ | |
| 7 | | | | White 02 ____ | | | | 1 5 | | 1 6 | |
| TEST _____ lbs | | | | Pink 03 ____ | | | | Actual 1 ____ | | SIZE _____ | |
| | | | | Black 04 ____ | | | | Estimated 2 ____ | | | |
| 8 | | | | Green 05 ____ | | | | | | | |
| Unknown 0 ____ | | | | Blue 06 ____ | | | | | | | |
| Mono-filament | | | | Multi-color 07 ____ | | | | | | | |
| Nylon 1 ____ | | | | Red 08 ____ | | | | | | | |
| Cotton 2 ____ | | | | Other 99 ____ | | | | | | | |
| Steel Wire 3 ____ | | | | | | | | | | | |
| Other 9 ____ | | | | | | | | | | | |
| 8A | | | | | | | | | | | |
| GANGIONS | | | | LEADERS * | | | | LIGHT STICKS USED? | | COMMENTS | |
| | | | | 3 0 | | | | | | | |
| DISTANCE _____ | | | | USED? NO 0 ____ YES 1 ____ | | | | | | | |
| 2 3 | | | | 3 1 | | | | 3 6 | | | |
| BETWEEN _____ ft | | | | LENGTH _____ ft | | | | NO 0 ____ YES 1 ____ | | | |
| 2 4 | | | | 3 2 | | | | | | | |
| DIAMETER _____ mm | | | | TEST _____ lbs | | | | COLOR _____ | | | |
| 2 5 | | | | Unknown 00 ____ | | | | Unknown 00 ____ | | | |
| TEST _____ lbs | | | | Clear 01 ____ | | | | White 02 ____ | | | |
| | | | | White 02 ____ | | | | Pink 03 ____ | | | |
| LENGTH _____ | | | | Pink 03 ____ | | | | Green 05 ____ | | | |
| COUNT _____ | | | | Black 04 ____ | | | | Blue 06 ____ | | | |
| 2 6 | | | | Green 05 ____ | | | | Red 08 ____ | | | |
| _____ ft | | | | Blue 06 ____ | | | | Orange 09 ____ | | | |
| | | | | Red 08 ____ | | | | Purple 10 ____ | | | |
| _____ ft | | | | Combination 98 ____ | | | | Combination 98 ____ | | | |
| | | | | Other 99 ____ | | | | Other 99 ____ | | | |
| 2 8 | | | | 3 3 A | | | | 3 7 A | | | |
| MATERIAL _____ | | | | SWIVELS 3 4 | | | | | | | |
| Unknown 0 ____ | | | | USED? NO 0 ____ YES 1 ____ | | | | | | | |
| Mono-filament | | | | NUMBER SWIVELS/GANGION | | | | NUMBER _____ | | | |
| Nylon 1 ____ | | | | 3 5 | | | | 3 8 | | | |
| Cotton 2 ____ | | | | | | | | | | | |
| Other 9 ____ | | | | | | | | | | | |

* = fill in for other line gears

NMFS FISHERIES OBSERVER PROGRAM
LOGLINE GEAR CHARACTERISTICS LOG

 OBS/ TRIP ID * E03715-
 DATE LAND (mm/yy) * 07 / 01

| | | | | | | | | | | | |
|-----------------------------|--|---------------------|--|--|--|---------------------------|---------------------|-----------------------|----------------|----------------------------------|--|
| GEAR CODE * | | GEAR NUMBER(S) * | | NUMBER OF HOOKS* | | NUMBER OF SECTIONS | | SECTION LENGTH | | | |
| 040 | | 1,2 & 3 | | 1,920 | | 4 | | 2 . 5 nm | | | |
| MAINLINE * | | | | FLOATS | | | ANCHOR USED? | | HOOKS * | | |
| # OF STRANDS ____1____ | | COLOR | | AVERAGE | | NO 0 __X__ YES 1 __ | | MODEL/ | | SIZE | |
| | | Unknown 00 ____ | | HOOKS | | | | PATTERN | | | |
| DIAMETER ____3.2____mm | | Clear 01 ____ | | TYPE USED? NUMBER BETWEEN | | WEIGHT ____lbs | | BRAND | | | |
| | | White 02 ____ | | | | | | Eagle Claw ____ | | 9016 ____ 8/0 ____ | |
| TEST ____900____lbs | | Pink 03 ____ | | Unknown NO 0 __X__ YES 1 ____ | | Actual 1 ____ | | Eagle Claw ____ | | 9015 ____ 9/0 ____ | |
| | | Black 04 ____ | | | | Estimated 2 ____ | | | | | |
| MATERIAL | | Green 05 ____ | | Polyball NO 0 ____ YES 1 __X__ 8 ____ 240 ____ | | | | DROPLINE | | COUNT | |
| Unknown 0 ____ | | Blue 06 __X__ | | | | | | LENGTH ____32____ft | | RADIO BEACONS ____4____ | |
| Mono-filament | | Multi-color 07 ____ | | Bullet/Daub NO 0 ____ YES 1 __X__ 250 ____ 10 ____ | | | | DISTANCE | | | |
| Nylon 1 __X__ | | Red 08 ____ | | Other NO 0 __X__ YES 1 ____ | | | | BETWEEN ____500____ft | | RADAR REFLECTORS ____4____ | |
| Cotton 2 ____ | | Other 99 ____ | | | | | | | | | |
| Steel Wire 3 ____ | | | | LEADERS * | | LIGHT STICKS USED? | | | | | |
| Other 9 ____ | | | | USED? NO 0 ____ YES 1 __X__ | | NO 0 ____ YES 1 __X__ | | | | | |
| GANGIONS | | | | LENGTH ____4____ft | | | | | | | |
| DISTANCE | | COLOR | | TEST ____400____lbs | | COLOR | | | | | |
| BETWEEN ____200____ft | | Unknown 00 ____ | | | | Unknown 00 ____ | | | | | |
| DIAMETER ____2.0____mm | | Clear 01 ____ | | MATERIAL | | White 02 ____ | | | | | |
| | | White 02 ____ | | Unknown 0 ____ | | Pink 03 ____ | | | | | |
| TEST ____400____lbs | | Pink 03 ____ | | Mono-filament | | Green 05 ____ | | | | | |
| LENGTH COUNT | | Black 04 ____ | | Nylon 1 ____ | | Blue 06 __X__ | | | | | |
| ____100____ft ____1,800____ | | Green 05 ____ | | Steel Wire 3 __X__ | | Red 08 ____ | | | | | |
| ____50____ft ____120____ | | Blue 06 __X__ | | Other 9 ____ | | Orange 09 ____ | | | | | |
| | | Red 08 ____ | | | | Purple 10 ____ | | | | | |
| MATERIAL | | Combination 98 ____ | | SWIVELS | | Combination 98 ____ | | | | | |
| Unknown 0 ____ | | Other 99 ____ | | USED? NO 0 ____ YES 1 __X__ | | Other 99 ____ | | | | | |
| Mono-filament | | | | NUMBER SWIVELS/GANGION | | NUMBER | | | | | |
| Nylon 1 __X__ | | | | 2 | | 1,920 | | | | | |
| Cotton 2 ____ | | | | | | | | | | | |
| Other 9 ____ | | | | | | | | | | | |
| | | | | | | | | | | * = fill in for other line gears | |

| |
|--|
| OBS/ TRIP ID * |
| DATE LAND (mm/yy) * / |

| | | | | | | | | | | | | | |
|---|--|------------------|--|---|--|--------------------|--|---|--|---|--|--|--|
| GEAR CODE * | | GEAR NUMBER(S) * | | NUMBER OF HOOKS* | | NUMBER OF SECTIONS | | SECTION LENGTH nm | | | | | |
| MAINLINE * # OF STRANDS _____ COLOR _____ DIAMETER _____mm Clear _____ 00 _____ TEST _____lbs White _____ 01 _____ Pink _____ 02 _____ Black _____ 03 _____ Green _____ 04 _____ Blue _____ 05 _____ Mono-filament _____ 06 _____ Nylon _____ 07 _____ Cotton _____ 08 _____ Steel Wire _____ 09 _____ Other _____ | | | | FLOATS TYPE USED? NUMBER AVERAGE HOOKS BETWEEN Unknown NO 0 ____ YES 1 ____ Polyball NO 0 ____ YES 1 ____ Bullet/Daub NO 0 ____ YES 1 ____ Other NO 0 ____ YES 1 ____ | | | | ANCHOR USED? NO 0 ____ YES 1 ____ WEIGHT _____lbs Actual 1 ____ Estimated 2 ____ | | HOOKS * BRAND MODEL/PATTERN SIZE _____ | | | |
| | | | | | | | | | | | | DROPLINE LENGTH _____ft DISTANCE BETWEEN _____ft | |
| | | | | | | | | COMMENTS * = fill in for other line gears | | | | | |
| | | | | | | | | | | LEADERS * USED? NO 0 ____ YES 1 ____ LENGTH _____ft TEST _____lbs MATERIAL Unknown 0 ____ Mono-filament Nylon 1 ____ Steel Wire 3 ____ Other 9 ____ | | | |
| | | | | | | | | | | | | SWIVELS USED? NO 0 ____ YES 1 ____ NUMBER SWIVELS/GANGION | |
| GANGIONS DISTANCE BETWEEN _____ft DIAMETER _____mm COLOR _____ TEST _____lbs Clear _____ 00 _____ White _____ 01 _____ Pink _____ 02 _____ Black _____ 03 _____ Green _____ 04 _____ Blue _____ 05 _____ Red _____ 06 _____ Combination 98 _____ Other 99 _____ MATERIAL Unknown 0 ____ Mono-filament Nylon 1 ____ Cotton 2 ____ Other 9 ____ | | | | | | | | | | | | | |

LOGLINE HAUL LOG

This log contains detailed questions about the setting and hauling of gear, and the haul's catch. Complete a new log after each hauling of gear. If you feel that you cannot go on deck for weather related safety reasons, record as much information on this log as possible (*i.e.* Header Information, weather, depths, times, positions, *etc.*).

If the gear is set, and only partially hauled, complete a Longline Haul Log with the Species Information section completed as fully as possible, and "Haul Aborted" recorded following the last species record. An aborted haul should be recorded as observed, whenever it fits the definition of an observed haul (F).

Any pelagic species (*i.e.* swordfish, billfish, tuna, bonito, sharks, rays, *etc.*), sturgeons, rays or tagged fish caught in this haul must be recorded on an Individual Animal Log to provide information on each animal caught by the gear. This Longline Haul Log will serve as a cover sheet for any Individual Animal Log(s) corresponding to this haul that may follow. In the **pelagic longline fishery**, most animals caught by this gear will be recorded on an Individual Animal Log. Only dressed parts of pelagic species, such as shark fins and fish chunks, belong in the Species Information section of this log. Also in the pelagic longline fishery, debris will be recorded on the Individual Animal Log. In the **demersal longline fishery** catches of groundfish species and debris will be recorded in the species section of this log. For all fisheries, incidental catches of marine mammals, sea turtles, and sea birds must be recorded on a Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

If rod and reel or other line gears are used, the following fields on the Longline Haul Log may be omitted: MAINLINE LENGTH (#6), ITEMS USED: RATTLERS and SURFACE LIGHTS (#9), NUMBER OF ITEMS USED: RATTLERS and SURFACE LIGHTS (#10), NUMBER OF HOOKS TENDED (#14) and NUMBER OF HOOKS REBAITED (#15).

If there are insufficient lines on one form for all species caught in this haul, continue listing species on an additional Longline Haul Log, making sure to complete all of the Header Information (A-C) and Haul

Number (E).

If information is unavailable or unknown to any question except a "No/Yes" question, record a dash (-) in the field. If the answer to a "No/Yes" question is unknown, record a "9" on the line next to the code for "No" to indicate that a field was not skipped, but the answer is unknown. If a field relates to a question to which you previously answered "No", leave the field blank.

Become familiar with the following definitions.

DEFINITIONS

Set Begin: First component of longline/line gear deployed.

Set End: Longline/line gear secured to high flyer or anchoring device, or longline/line gear completely deployed.

Haul Begin: Hauling equipment put into gear or retrieval of gear commences.

Haul End: Longline/line gear completely retrieved and aboard vessel.

INSTRUCTIONS

For instructions on completing fields **A-W**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR NUMBER: Record the gear number used for this haul as uniquely identified on the appropriate Longline Trawl Gear Characteristics Log.

2. GEAR CONDITION: Indicate the condition of the gear at haulback, even if this was the condition of the gear when set, by recording the most appropriate two digit code listed below, and in Appendix J. Gear Condition Codes:

- 00 = Unknown.
- 61 = No gear damage, or only a few hooks missing.
- 62 = Less than 50% of gear fouled due to weather/oceanic conditions. Gear tangled, spun up or otherwise impaired the

- fishability of the gear.
- 63 = Greater than 50% of gear fouled due to weather/oceanic conditions. Gear tangled, spun up or otherwise impaired the fishability of the gear.
 - 64 = Less than 50% of hooks missing.
 - 65 = Greater than 50% of hooks missing.
 - 66 = Parted off, no damage.
 - 67 = Parted off, less than 50% gear damaged.
 - 68 = Gear completely damaged, or completely lost.
 - 99 = Other, specify in COMMENTS.

SET/HAUL INFORMATION

NOTE: Definitions of Set/Haul Begin/End may be found in the introduction.

3. BEGIN/END DATE: Record the month, day, and year, based on local time, that this set began and ended. Record the month, day, and year, based on local time, that this haul began and ended.

4. BEGIN/END TIME: Record the local time, using the 24 hour clock (0000-2359), that this set began and ended, *i.e.* when the first component of the longline/line gear is deployed, (Set Begin), and when the longline/line gear is secured to the high flyer or anchoring device, or completely deployed (Set End). Record the local time, using the 24 hour clock (0000-2359), that this haul began and ended, *i.e.* when the hauling equipment is put into gear or retrieval of gear commences (Haul Begin), and when the longline/line gear is completely retrieved and aboard the vessel (Haul End).

NOTE: If rod and reel or other line gears are used, the set times recorded should reflect when the gear is first deployed and fishing activity starts. The haul times recorded should reflect when the gear is removed from the water and fishing activity ceases. Within these times the gear may periodically be removed from the water briefly to remove a fish, rebait the line, check the line for presence of fish, *etc.*

5. WATER TEMPERATURE: Record, to the nearest tenth of a degree Fahrenheit, the surface water temperature when this set began and ended. Record, to the

nearest tenth of a degree Fahrenheit, the surface water temperature when this haul began and ended.

NOTE: Use a "ScoopMaster" thermometer to obtain these temperatures.

NOTE: If these temperatures are obtained in Celsius, use Appendix Q. Conversion Tables to convert them to Fahrenheit.

ADDITIONAL HAUL INFORMATION

6. MAINLINE LENGTH: Record, to the nearest tenth of a nautical mile, the length of the mainline for this gear. This should account for all of the tubs that are tied together on that particular "string" of gear.

NOTE: One nautical mile = 6,080 feet.

NOTE: For rod and reel and other line gears, record a dash (-) in this field.

7. SET SPEED: Record, to the nearest tenth of a knot, the average vessel setting speed, over the bottom, for this haul. This information may be obtained from the captain.

NOTE: For gears that are trolled, record the trolling speed of the vessel. If rod and reel or handline gear is used but not trolled, record a dash.

8. SET METHOD: Record the method that best describes the manner in which the gear for this haul was set by placing an "X" next to the appropriate code:

- 00 = Unknown.
- 01 = Temperature.
- 02 = Bottom Contours (*i.e.* depth).
- 03 = Compass/ Loran.
- 04 = Tide/ Current.
- 05 = Visual (*i.e.* echosounder, surface feeding).
- 06 = Eddy.
- 98 = Mixed, (more than one code applies) record all set methods on line 8A.
- 99 = Other, record the set method(s) on line 8A.

ADDITIONAL GEAR ITEMS

9. ITEMS USED?: Record whether each piece of equipment listed below is used on the gear in this haul by placing an "X" next to the appropriate code:

- 0 = No.
- 1 = Yes.

Equipment:

Rattlers.

Surface Lights.

Additional Line Weights.

NOTE: For rod and reel and other line gears, record a dash (-) in the fields relating to Rattlers and Surface Lights.

10. NUMBER: Record the number of each piece of equipment used on the gear in this haul.

NOTE: For rod and reel and other line gears, record a dash (-) in the fields relating to Rattlers and Surface Lights.

11. WEIGHT OF ADDITIONAL LINE WEIGHTS: Record, in whole pounds, the **total** weight of any additional line weights attached to the mainline of this gear for this haul.

NUMBER OF HOOKS

12. SET: Record the **total** number of hooks that are used for this set.

13. LOST: Record the **total** number of hooks that are lost from this set. If this number differs from **NUMBER OF HOOKS SET** minus **NUMBER OF HOOKS HAULED**, then record the reason(s) in **COMMENTS**.

NOTE: Do not include the number of hooks cut off by the crew here, but in **COMMENTS**.

14. TENDED: Record the number of hooks pulled during "hotlining" (vessel runs the line and only pulls hooks where floats are submerged). If none are tended record a zero.

NOTE: For rod and reel and other line gears, record a dash (-) in this field.

15. REBAITED: Record the number of hooks pulled, rebaited and reset. If none are rebaited record a zero.

NOTE: For rod and reel and other line gears, record a dash (-) in this field.

BAIT

16. POUNDS: Record, in whole pounds, the amount of bait used for this haul, for up to three major baits.

This information may be obtained from the captain.

NOTE: If artificial bait is used, record a dash (-) in this field.

17. KIND: Indicate the kind of bait used for this haul, for up to three major baits, by recording the most appropriate two digit code listed below, and in Appendix O. Bait Codes:

- 00 = Unknown.
- 01 = Mackerel.
- 02 = Herring.
- 03 = Squid.
- 04 = Artificial, record a dash (-) for POUNDS (#16), BAIT TYPE (#18), and BAIT CONDITION (#19).
- 05 = Redfish.
- 06 = Sardine.
- 07 = Scad.
- 09 = Clams
- 99 = Other, record the bait kind in **COMMENTS**.

NOTE: Artificial bait includes lures and jigs, with or without teasers.

18. TYPE: Indicate the type of bait used for this haul, for up to three major baits, by recording the most appropriate one digit code listed below, and in Appendix O. Bait Codes:

- 0 = Unknown.
- 1 = Whole.
- 2 = Cut.
- 3 = Live.
- 9 = Other, record the bait type in **COMMENTS**.

Example: Fish racks, frames or bellies are "Cut" (2), record cut type in **COMMENTS**.

19. CONDITION: Indicate the condition of the bait used for this haul, for up to three major baits, by recording the most appropriate one digit code listed below, and in Appendix O. Bait Codes:

- 0 = Unknown.
- 1 = Previously Frozen.
- 2 = Fresh.
- 3 = Salted.
- 6 = Frozen.
- 7 = Semi-frozen.
- 8 = Combination, record all bait conditions in **COMMENTS**.

9 = Other, record the bait condition in COMMENTS.

Example: Frozen and salted bait is “Combination” (8).

20. DEPTH RANGE, HOOKS: Record, in whole fathoms, the range of depths (shallowest to deepest) from the surface, which the hooks fish for this haul. This depth is calculated by obtaining the sum of the dropline length, the gangion length, the leader length, and the shank length, *i.e.* the distance from the surface of the water to the bottom of the hook.

NOTE: In the demersal longline fishery these values should reflect the bottom depth and may only consist of one depth value (*i.e.* recorded as 20 - 20 fm).

COMMENTS

Record any additional information regarding this haul, *i.e.* unusual species caught, *etc.* If more room is needed, use the back of this log, making sure to write “See Back” on the front of the log. Reference each comment with its corresponding field name.

LONGLINE HAUL LOG

| | | |
|-------------------|----------|----|
| OBS/TRIP ID | A | |
| DATE LANDED mm/yy | B | / |
| PAGE # | C | of |

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12/01/03

OBL LH, OBH AU, OBS PP

NMFS FISHERIES OBSERVER PROGRAM

LONGLINE HAUL LOG

| | |
|-------------------|---------|
| OBS/TRIP ID | E03047- |
| DATE LANDED mm/yy | 07 / 01 |
| PAGE # | 1 of 1 |

| | | | | | | | | | | | |
|---|---------------|---------------|--|-------------------|--------------------|--------------------|---------------------|---------------------|---------------------|--|----------------|
| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS ? | CATCH ? | INC TAKE ? | WEATHER CODE | WIND | | WAVE HEIGHT | DEPTH, HAUL BEGIN | GEAR COND CODE |
| 040 | 1 | 24 | NO 0_X_ YES 1_ | NO 0_ YES 1_X_ | NO 0_ YES 1_X_ | 01 | SPEED 20 kn | DIRECTION 0 O | 14 ft | 200 fm | 62 |
| SET/HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TEMP fahrenheit | MAINLINE LENGTH* | TARGET SPECIES CODE | | |
| S E T | BEGIN | 07/ 15 /01 | 17 : 30 | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | 76 .5 | 20 .7 nm | Swordfish | |
| | END | 07/ 15 /01 | 21 : 35 | | 33 43.5' | | 77 21.7' | 74 .5 | | | |
| H A U L | BEGIN | 07/ 16 /01 | 07 : 30 | | 32 51.8' | | 77 51.9' | 75 .5 | SET SPEED | SET METHOD | |
| | END | 07/ 16 /01 | 13 : 45 | | 33 41.2' | | 77 20.1' | 76 .5 | 7.4 kn | Unknown 00_ Temperature 01_X_ Bottom Contours 02_ Compass / Loran 03_ Tide / Current 04_ Visual 05_ Eddy 06_ Mixed 98_ Other 99_ | |
| ITEMS USED? | | | | NUMBER OF HOOKS | | BAIT | | | | HOOK DEPTH RANGE | |
| TYPE NO YES NUMBER | | | | SET 1,920 | | LBS KIND TYPE COND | | | | 10 _ 11 fm | |
| Rattlers* 0_X_ 1_ | | | | LOST 20 | | #1 50_ 01_ 1_ 3_ | | | | | |
| Surface Lights* 0_ 1_X_ 4_ | | | | TENDED* 0 | | #2 250_ 03_ 1_ 1_ | | | | | |
| Additional Line Wts 0_X_ 1_ | | | | REBAITED* 0 | | #3 _ _ _ _ | | | | | |
| WEIGHT OF ADDITIONAL LINE WEIGHTS _ lbs | | | | | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | COMMENTS | | | | |
| NAME | CODE | K / D | | CODE | D/R | A/E | | | | | |
| Mako Shark (Fins) | | K | 45 | 100 | D | A | | | | | |
| Swordfish (Chunks) | | K | 125 | 100 | D | A | | | | | |
| | | | | | | | | | | | |
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* Longline only

01/01/01

OBL LH, OB HAU, OBS PP

**NMFS FISHERIES OBSERVER PROGRAM
 LONGLINE HAUL LOG**

| | |
|-------------------|----|
| OBS/TRIP ID | |
| DATE LANDED mm/yy | / |
| PAGE # | of |

| GEAR CODE | GEAR NUMBER | HAUL # | HAUL OBS ? | CATCH ? | INC TAKE ? | WEATHER CODE | WIND | | WAVE HEIGHT | DEPTH, HAUL BEGIN | GEAR COND CODE |
|--|---------------|---------------|--|-------------------------|-------------------------|---------------------|------------|-------------------|----------------|-------------------|----------------|
| | | | | | | | SPEED | DIRECTION | | | |
| | | | NO 0 ____ YES 1 ____ | NO 0 ____ YES 1 ____ | NO 0 ____ YES 1 ____ | | | O | ft | fm | |
| SET/HAUL INFO | DATE mm/dd/yy | TIME 24 hours | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | TEMP | MAINLINE LENGTH * | TARGET SPECIES | CODE | |
| | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | fahrenheit | | | | |
| S BEGIN | / / | : | 9960- | | 9960- | | o | . nm | | | |
| E END | / / | : | 9960- | | 9960- | | o | | | | |
| T BEGIN | / / | : | 9960- | | 9960- | | o | SET SPEED | SET METHOD | | |
| A END | / / | : | 9960- | | 9960- | | o | | | | |
| H BEGIN | / / | : | 9960- | | 9960- | | o | . kn | | | |
| U END | / / | : | 9960- | | 9960- | | o | | | | |
| L | / / | : | 9960- | | 9960- | | . | | | | |
| ITEMS USED? | | | NUMBER OF HOOKS | | BAIT | | | HOOK DEPTH RANGE | | | |
| TYPE NO YES NUMBER | | | SET | | LBS KIND TYPE COND | | | - fm | | | |
| Rattlers* 0 ____ 1 ____ | | | LOST | | #1 | | | | | | |
| Surface Lights* 0 ____ 1 ____ | | | TENDE * ____ | | #2 | | | | | | |
| Additional Line Wts 0 ____ 1 ____ | | | REBAITED* ____ | | #3 | | | | | | |
| WEIGHT OF ADDITIONAL LINE WEIGHTS ____ lbs | | | | | | | | | | | |
| SPECIES | | CATCH DISP | POUNDS | DISP | WEIGHT | | COMMENTS | | | | |
| NAME | CODE | K / D | | CODE | D/R | A/E | | | | | |
| | | | | | | | | | | | |
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* = Longline only

MARINE MAMMAL, SEA TURTLE, and SEA BIRD INCIDENTAL TAKE LOG

The purpose of this log is to document incidentally taken marine mammals, sea turtles, and sea birds. Complete a record on this log for each incidental take. If more than one animal is taken at a time, record each animal on a separate line. The same log may be used for all incidental takes occurring in a trip, regardless of haul number, if they are all caught by the same vessel. Complete a separate log for each foreign and domestic vessel that takes a marine mammal, sea turtle, or sea bird. Do not record information on terrapins on this log. These animals should be recorded on an Individual Animal Log.

An animal must not be recorded on both the Marine Mammal, Sea Turtle, and Debris Sighting Log **and** the Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. If a dead or injured marine mammal, sea turtle, or sea bird is seen in the water during or immediately after a haulback, the observer must decide if the animal was once entangled in the gear of the vessel, *i.e.* whether the animal(s) is (are) determined to be an incidental take.

Gear or gear marks on the animal and/or damage to the fishing gear may help to distinguish incidental takes from sightings. **If at any time during an observed trip a marine mammal, sea turtle, or sea bird directly contacts the vessel, or the vessel's fishing gear AND any part of the animal is entangled, snagged, ensnared, caught, hooked, collided with, hit, injured or killed by the vessel or its gear, regardless of the final condition and release of the animal, it should be documented on the Incidental Take Log.** Single bones or disarticulated marine mammal, sea turtle, or sea bird skeletons are recorded in the species section of the Haul Log as bone, nk. Articulated ($\geq 75\%$ of skeleton) marine mammal, sea turtle, or sea bird skeletons are recorded on the Incidental Take Log and the INC TAKE? field on the corresponding Haul Log should be checked as 'yes'. Comments and photo's MUST be provided in both instances.

Refer to the Marine Mammal, Sea Turtle, and Debris Watch instructions in the NEFSC Observer Program Training Manual for instructions on conducting marine mammal, sea turtle, and debris watches and documenting sightings.

INSTRUCTIONS

For instructions on completing the Header fields **A**, **B** and **C**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. PSID#: A consecutive identification number (Protected Species ID) is assigned to each animal that is incidentally taken on this trip. If there are insufficient lines on one form to record all animals caught on this trip, continue listing animals on an additional Marine Mammal, Sea Turtle and Sea Bird Incidental Take Log, making sure to fill in the preceding number.

2. HAUL NUMBER: Record the haul number assigned to the haul in which the take(s) occurred. This number must agree with the number recorded for this haul on the corresponding Haul Log.

NOTE: If you are on a vessel which received takes transferred from another vessel, record the **observer-assigned** consecutive transfer number.

3. GEAR NUMBER: Record the **gear number** assigned to this uniquely identified gear in which the animal is/was taken, as specified on the corresponding Gear Characteristics Log.

4. NET NUMBER/DREDGE POSITION: (Gillnet and Scallop Dredge fisheries only):
Gillnet: Record the **net number** within the string in which the animal is/was taken. Start with "1", for the first net to be hauled back, and continue numbering the nets sequentially. *Scallop dredge:* Indicate which dredge the incidental take was associated with:

P - port; S - starboard; U - unknown.

NOTE: All other gear types should leave this field blank.

5. TIME BROUGHT UP: Record the local time using the 24 hour clock (0000-2359) that each animal is brought onboard or alongside the vessel.

NOTE: Domestic observers should record local time. Foreign observers should

record Greenwich Mean Time (GMT).
Example: 20:32.

6. ACTIVE DETERRENT DEVICE CONDITION: Record the condition of the active deterrent device that **immediately follows** an incidental take by recording the most appropriate code:

- 0 = Unknown.
- 1 = No Pingers Used On Gear.
- 2 = Audible.
- 3 = Inaudible, Tested and Working.
- 4 = Inaudible, Tested and Not Working.
- 5 = Inaudible, Not Tested.
- 6 = Absent (Lost).
- 9 = Other, describe in COMMENTS.

NOTE: "Tested" means the pinger signal was measured using a testing tool provided by the NEFSC Observer Program or contractor.

NOTE: If possible, record the condition of the active deterrent device that **immediately precedes** an incidental take in COMMENTS.

7. SPECIES NAME: Record the complete common name of each animal incidentally taken on this trip, as listed in Appendix A. Species Names.

NOTE: If it is not possible to make a positive species identification, identify the animal to the most specific generic group of which you are positive, *i.e.* baleen whale, unidentified dolphin, seal, sea turtle, duck, *etc.* **DO NOT GUESS AT SPECIES IDENTIFICATION.**

8. SPECIES CODE: Leave this field blank.

9. TAG NUMBER(S): Record the complete alphanumeric number(s) from the tag(s) that you attach, or that were already attached, to the animal. See the Tagging & Tag Recapture instructions in the NEFSC Observer Program Training Manual for further information on recording tag numbers.

10. TAG CODES: Indicate the origin of the tag number recorded above (#9), for each tag attached to the animal, by recording the appropriate one digit code:

- 0 = Unknown.
- 1 = Tag Applied by Observer.

- 2 = No Tag(s).
- 3 = Tags Already Present, Left On.
- 4 = Tags Already Present, Removed.

Example: A turtle is brought onboard the vessel with one tag, XXC123. The observer applies another tag, XXH782.

| TAG | |
|-----------|------|
| NUMBER(S) | CODE |
| XXC123 | 3 |
| XXH782 | 1 |

11. ENTANGLEMENT SITUATION: Indicate the initial entanglement situation of the animal by recording the most appropriate two digit code:

- 00 = Unknown.
- 01 = Fell from gear at a point unknown, *i.e.* the animal fell from the gear, but the time during haulback when this occurred is unknown.
- 02 = Fell from gear before exiting water, *i.e.* the animal was still under water when it fell from the gear.
- 03 = Fell from gear once hauled out of the water, *i.e.* the animal was mostly/completely out of the water when it fell from the gear because the weight and pulling action of the net caused the animal to fall from the gear.
- 04 = Fell from gear due to force of roller, *i.e.* the animal reached the haulback roller and the roller's force caused it to fall from the gear.
- 05 = Removal requires cutting of gear/animal, *i.e.* the gear and/or the animal is cut in order to remove the animal from the gear.
- 06 = Removal does NOT require cutting of gear/animal, *i.e.* pulling, unwrapping, unrolling, and/or detangling the gear allows the animal to be removed from the gear, without cutting the gear and/or the animal.
- 10 = **Sea Bird** caught, gangion attached to mainline.
- 11 = **Sea Bird** caught, gangion unattached to mainline.
- 12 = Hooked, ingested.
- 13 = Hooked, beak.
- 14 = Hooked, head.
- 15 = Hooked, flipper.

- 16 = Hooked, carapace.
- 17 = Hooked, other/unknown, describe the hooked entanglement situation in COMMENTS.
- 18 = Caught inside dredge chain bag.
- 19 = On top of dredge or dredge frame.
- 20 = Caught in dredge frame or in between bails.
- 21 = Caught inside dredge in twine top.
- 22 = Caught on sweep/tickler/rock chains.
- 23 = Caught in bridles/cables/warp.
- 24 = Inside mouth of trawl net.
- 25 = Inside belly of trawl net.
- 26 = Inside codend of trawl net.
- 27 = Caught in sweep or footrope of trawl net.
- 28 = Contact with vessel or vessel equipment other than fishing gear.
- 29 = Entangled in gear other than vessel's fishing gear (e.g. ghost gear caught by vessel)
- 99 = Other, describe the entanglement situation in COMMENTS.

NOTE: If more than one code applies to a situation choose the code that describes the primary entanglement/interaction (e.g. a turtle is observed inside the twine top of a dredge and falls from the gear as it is hauled up - choose code 21 as it best describes the primary interaction).

12. ANIMAL CONDITION: Indicate the condition of the animal **when released** by recording the most appropriate two digit code:

- 00 = Unknown, explain why you can not identify the animal condition in COMMENTS.
- 01 = Alive, condition unknown.
- 02 = Alive, not injured.
- 03 = Alive, injured, describe how the animal is injured in COMMENTS.
- 04 = Alive, hook/gear in/around mouth, attempt to determine where in the mouth the hook is, *etc.* and describe in COMMENTS.
- 05 = Alive, hook/gear in/around flipper, *i.e.* hook in the flipper or gear around the flipper.
- 06 = Alive, hook/gear in/around another single body part, *i.e.* hook in the neck or plastron; specify which in COMMENTS.

- 07 = Alive, hook/gear in/around several body parts, describe more fully in COMMENTS.
- 08 = Alive, seen by captain and/or crew ONLY.
- 09 = Alive, resuscitated (turtle).
- 10 = Dead, condition unknown.
- 11 = Dead, fresh.
- 12 = Dead, moderately decomposed.
- 13 = Dead, severely decomposed.
- 14 = Dead, seen by captain and/or crew ONLY.

NOTE: Record any additional comments about the condition of turtles in COMMENTS, as these data are needed for obtaining better information on the survivability of sea turtles. Comments such as: whether the turtle swam away vigorously or lethargically, the amount of gear remaining on the animal, the time required to resuscitate the animal, *etc.* are requested.

13. ONBOARD?: Indicate whether the animal was brought onboard the vessel by recording the appropriate one digit code.

- 0 = No. Note the reason the animal was not brought onboard in COMMENTS.
- 1 = Yes.

14. PHOTO(S) TAKEN?: Indicate whether any photograph(s) is (are) taken of the animal by recording the appropriate one digit code:

- 0 = No. If no photographs are taken, record the reason in COMMENTS.
- 1 = Yes.

NOTE: All marine mammals, sea turtles, and sea birds incidentally taken **must be** photographed as photos are necessary to assist in corroborating species identification. Only under extreme conditions should this field reflect that no photos were taken. Refer to the Photo Log instructions in the NEFSC Observer Program Manual for further information regarding which photographs to take for each incidental take species.

15. ANIMAL RECORDED ON SAMPLE LOG?: Indicate whether this animal is recorded on the Marine

Mammal Biological Sample Log or the Sea Turtle Biological Sample Log by recording the appropriate one digit code:

- 0 = No. If no measurements and/or samples are taken from a marine mammal or sea turtle, record the reason in COMMENTS.
- 1 = Yes.

16. ESTIMATED LENGTH: Record, in whole centimeters, the **estimated straight total** length of the animal.

NOTE: No lengths are taken for sea birds; leave this field blank.

NOTE: If **actual measurements** are taken on this animal, record a dash (-) in this field. Actual measurements are recorded on the Marine Mammal Biological Sample Log and the Sea Turtle Biological Sample Log.

COMMENTS

Record any additional information regarding the incidental take(s), especially when data are unable to be collected. If more room is needed, use the back of this log, making sure to indicate "See Back" on the front. Reference each comment with its corresponding field name.

NOTE: If an observer sees an animal fall from the gear (alive or dead), after completing this log, record additional comments regarding the "fallout," *i.e.* the specifics of how the animal was entangled, whether the animal sank or floated away, *etc.*

NOTE: For turtle takes, comment on whether the animal slid out or escaped from the gear. Comment on if and how the turtle was hooked and/or entangled. If any gear was left on the animal when released, thoroughly describe the amount of gear, including the linear feet.

NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL, SEA TURTLE, AND SEA BIRD INCIDENTAL TAKE LOG (Front)**

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| PSID # | HAUL NUM | GEAR NUM | NET NUM/ DREDGE POSITION (p/s/u) | TIME 24 hours | ADD COND CODE | SPECIES | | TAG | | ENTANG SITU CODE | ANIMAL COND CODE | ANIMAL ONBRD? 0 = No 1 = Yes | PHOTO TAKEN? 0 = No 1 = Yes | SAMPLE LOG? 0 = No 1 = Yes | ESTIM LEN cm (if no actual) (no birds) |
|--------|-------------|-------------|---|------------------|---------------------|---------|------|--|---------|------------------------|------------------------|---------------------------------------|--------------------------------------|-------------------------------------|---|
| | | | | | | NAME | CODE | NUMBER(S) (Record the most recent tag first.) | CODE(S) | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1 | | | | : | | | | | | | | | | | |
| 2 | | | | : | | | | | | | | | | | |
| 3 | | | | : | | | | | | | | | | | |
| 4 | | | | : | | | | | | | | | | | |
| 5 | | | | : | | | | | | | | | | | |
| 6 | | | | : | | | | | | | | | | | |
| 7 | | | | : | | | | | | | | | | | |
| 8 | | | | : | | | | | | | | | | | |
| 9 | | | | : | | | | | | | | | | | |
| 0 | | | | : | | | | | | | | | | | |

COMMENTS

NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL, SEA TURTLE, AND SEA BIRD INCIDENTAL TAKE LOG (Back)**

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|---|---|--|
| ACTIVE DETERRENT DEVICE (ADD) CONDITION CODES: 0 = Unknown 1 = No Fingers Used On Gear 2 = Audible 3 = Inaudible, Tested and Working 4 = Inaudible, Tested and Not Working 5 = Inaudible, Not Tested 6 = Absent (Lost) 9 = Other | ENTANGLEMENT / INTERACTION SITUATION CODES: 00 = Unknown 01 = Fell From Gear at a Point Unknown 02 = Fell From Gear Before Exiting Water 03 = Fell From Gear Once Hauled Out of Water 04 = Fell From Gear Due to Force of Roller 05 = Removal Requires Cutting of Gear/Animal 06 = Removal Does NOT Require Cutting of Gear/Animal 10 = Sea Bird Caught, Gangion Attached to Mainline 11 = Sea Bird Caught, Gangion Unattached to Mainline 12 = Hooked, Ingested 13 = Hooked, Beak 14 = Hooked, Head 15 = Hooked, Flipper 16 = Hooked, Carapace 17 = Hooked, Other/Unknown 18 = Caught Inside Dredge Chain Bag 19 = On Top of Dredge or Dredge Frame 20 = Caught in Dredge Frame or Between Bails 21 = Caught Inside Dredge in Twine Top 22 = Caught on Sweep/Tickler/Rock Chains 23 = Caught in Bridles/Cables/Warp 24 = Inside Mouth of Trawl Net 25 = Inside Belly of Trawl Net 26 = Inside Codend of Trawl Net 27 = Caught in Sweep or Footrope of Trawl Net 28 = Contact with Vessel or Vessel Equipment other than Fishing Gear 29 = Entangled in Gear other than Vessel's Fishing Gear (e.g. Ghost Gear Caught by Vessel) 99 = Other NOTE: If more than one code applies to a situation choose the code that describes the primary entanglement/interaction (e.g. a turtle is observed inside the twine top of a dredge and falls from the gear as it is hauled up - choose code 21 as it best describes the primary interaction). | ANIMAL CONDITION CODES (when released): 00 = Unknown 01 = Alive, Condition Unknown 02 = Alive, Not Injured 03 = Alive, Injured 04 = Alive, Gear In/Around Mouth 05 = Alive, Gear In/Around Flipper 06 = Alive, Gear In/Around Another Single Body Part 07 = Alive, Gear In/Around Several Body Parts 08 = Alive, Seen by Captain/Crew ONLY 09 = Alive, resuscitated (turtle) 10 = Dead, Condition Unknown 11 = Dead, Fresh 12 = Dead, Moderately Decomposed 13 = Dead, Severely Decomposed 14 = Dead, Seen by Capt/Crew ONLY |
| TAG CODES: 0 = Unknown 1 = Tag Applied by Observer 2 = No Tag(s) 3 = Tag Already Present, Left On 4 = Tag Already Present, Removed NOTE: Record Turtle Pit Tags on the Sample Log. | | |
| ADDITIONAL COMMENTS | | |

NMFS FISHERIES OBSERVER PROGRAM

MARINE MAMMAL, SEA TURTLE, AND SEA BIRD INCIDENTAL TAKE LOG (Front)

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| PAGE # | 1 | OF | 1 |

| PSID # | HAUL NUM | GEAR NUM | NET NUM/ DREDGE POSITION (p/s/u) | TIME 24 hours | ADD COND CODE | SPECIES | | TAG | | ENTANG SITU CODE | ANIMAL COND CODE | ANIMAL ONBRD? 0 = No 1 = Yes | PHOTO TAKEN? 0 = No 1 = Yes | SAMPLE LOG? 0 = No 1 = Yes | ESTIM LEN cm (if no actual) (no birds) |
|------------|----------|----------|--|------------------|---------------------|--------------------|------|---|---------|------------------------|------------------------|---------------------------------------|--------------------------------------|-------------------------------------|---|
| | | | | | | NAME | CODE | NUMBER(S) <small>(Record the most recent tag first.)</small> | CODE(S) | | | | | | |
| <u>0</u> 1 | 3 | 3 | 8 | 10:04 | 2 | Harbor Porpoise | | DØ7982 | 1 | 04 | 11 | 0 | 1 | 1 | 105 |
| <u>0</u> 2 | 4 | 4 | 2 | 12:13 | 2 | Loggerhead Turtle | | QQS555 PPD117 | 1 3 | 05 | 05 | 1 | 1 | 1 | - |
| <u>0</u> 3 | 4 | 4 | 3 | 12:20 | 6 | Greater Shearwater | | | 2 | 06 | 02 | 1 | 1 | 0 | - |
| <u>4</u> | | | | : | | | | | | | | | | | |
| <u>5</u> | | | | : | | | | | | | | | | | |
| <u>6</u> | | | | : | | | | | | | | | | | |
| <u>7</u> | | | | : | | | | | | | | | | | |
| <u>8</u> | | | | : | | | | | | | | | | | |
| <u>9</u> | | | | : | | | | | | | | | | | |
| <u>0</u> | | | | : | | | | | | | | | | | |

COMMENTS

PSID#01 - Fell from net when animal hit roller but was recovered with gaff. Animal was tagged and photographed over the side but was not brought on board. Tip of fluke retained for DNA. No beak; spade-like teeth. Very fresh with a small amount of scavenger damage around the eyes.

PSID#02 - Turtle was very active. Floatline and net meshing was tangled tightly around tip of right flipper. A tag was already present on the right flipper and I put a new one on the left flipper. There were no markings from old tags. Mesh was cut to release the turtle and there were no visible signs of injury. Swam away and dove - one foot of monofilament remained on flipper upon release.

PSID#03 - Shearwater shook free of net on the deck. Identified by black cap and white band at base of tail.

NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL, SEA TURTLE, AND SEA BIRD INCIDENTAL TAKE LOG (Back)**

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|---|---|--|
| ACTIVE DETERRENT DEVICE (ADD) CONDITION CODES: 0 = Unknown 1 = No Fingers Used On Gear 2 = Audible 3 = Inaudible, Tested and Working 4 = Inaudible, Tested and Not Working 5 = Inaudible, Not Tested 6 = Absent (Lost) 9 = Other | ENTANGLEMENT / INTERACTION SITUATION CODES: 00 = Unknown 01 = Fell From Gear at a Point Unknown 02 = Fell From Gear Before Exiting Water 03 = Fell From Gear Once Hauled Out of Water 04 = Fell From Gear Due to Force of Roller 05 = Removal Requires Cutting of Gear/Animal 06 = Removal Does NOT Require Cutting of Gear/Animal 10 = Sea Bird Caught, Gangion Attached to Mainline 11 = Sea Bird Caught, Gangion Unattached to Mainline 12 = Hooked, Ingested 13 = Hooked, Beak 14 = Hooked, Head 15 = Hooked, Flipper 16 = Hooked, Carapace 17 = Hooked, Other/Unknown 18 = Caught Inside Dredge Chain Bag 19 = On Top of Dredge or Dredge Frame 20 = Caught in Dredge Frame or Between Bails 21 = Caught Inside Dredge in Twine Top 22 = Caught on Sweep/Tickler/Rock Chains 23 = Caught in Bridles/Cables/Warp 24 = Inside Mouth of Trawl Net 25 = Inside Belly of Trawl Net 26 = Inside Codend of Trawl Net 27 = Caught in Sweep or Footrope of Trawl Net 28 = Contact with Vessel or Vessel Equipment other than Fishing Gear 29 = Entangled in Gear other than Vessel's Fishing Gear (e.g. Ghost Gear Caught by Vessel) 99 = Other NOTE: If more than one code applies to a situation choose the code that describes the primary entanglement/interaction (e.g. a turtle is observed inside the twine top of a dredge and falls from the gear as it is hauled up - choose code 21 as it best describes the primary interaction). | ANIMAL CONDITION CODES (when released): 00 = Unknown 01 = Alive, Condition Unknown 02 = Alive, Not Injured 03 = Alive, Injured 04 = Alive, Gear In/Around Mouth 05 = Alive, Gear In/Around Flipper 06 = Alive, Gear In/Around Another Single Body Part 07 = Alive, Gear In/Around Several Body Parts 08 = Alive, Seen by Captain/Crew ONLY 09 = Alive, resuscitated (turtle) 10 = Dead, Condition Unknown 11 = Dead, Fresh 12 = Dead, Moderately Decomposed 13 = Dead, Severely Decomposed 14 = Dead, Seen by Capt/Crew ONLY |
| TAG CODES: 0 = Unknown 1 = Tag Applied by Observer 2 = No Tag(s) 3 = Tag Already Present, Left On 4 = Tag Already Present, Removed NOTE: Record Turtle Pit Tags on the Sample Log. | | |
| ADDITIONAL COMMENTS | | |

NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL, SEA TURTLE, AND SEA BIRD INCIDENTAL TAKE LOG (Front)**

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| PSID # | HAUL NUM | GEAR NUM | NET NUM/ DREDGE POSITION (p/s/u) | TIME 24 hours | ADD COND CODE | SPECIES | | TAG | | ENTANG SITU CODE | ANIMAL COND CODE | ANIMAL ONBRD? 0 = No 1 = Yes | PHOTO TAKEN? 0 = No 1 = Yes | SAMPLE LOG? 0 = No 1 = Yes | ESTIM LEN cm (if no actual) (no birds) |
| | | | | | | NAME | CODE | NUMBER(S) <small>(Record the most recent tag first.)</small> | CODE(S) | | | | | | |
| 1 | | | | : | | | | | | | | | | | |
| 2 | | | | : | | | | | | | | | | | |
| 3 | | | | : | | | | | | | | | | | |
| 4 | | | | : | | | | | | | | | | | |
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| 9 | | | | : | | | | | | | | | | | |
| 0 | | | | : | | | | | | | | | | | |
| COMMENTS | | | | | | | | | | | | | | | |

NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL, SEA TURTLE, AND SEA BIRD INCIDENTAL TAKE LOG (Back)**

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|---|---|--|
| ACTIVE DETERRENT DEVICE (ADD) CONDITION CODES: 0 = Unknown 1 = No Fingers Used On Gear 2 = Audible 3 = Inaudible, Tested and Working 4 = Inaudible, Tested and Not Working 5 = Inaudible, Not Tested 6 = Absent (Lost) 9 = Other | ENTANGLEMENT / INTERACTION SITUATION CODES: 00 = Unknown 01 = Fell From Gear at a Point Unknown 02 = Fell From Gear Before Exiting Water 03 = Fell From Gear Once Hauled Out of Water 04 = Fell From Gear Due to Force of Roller 05 = Removal Requires Cutting of Gear/Animal 06 = Removal Does NOT Require Cutting of Gear/Animal 10 = Sea Bird Caught, Gangion Attached to Mainline 11 = Sea Bird Caught, Gangion Unattached to Mainline 12 = Hooked, Ingested 13 = Hooked, Beak 14 = Hooked, Head 15 = Hooked, Flipper 16 = Hooked, Carapace 17 = Hooked, Other/Unknown 18 = Caught Inside Dredge Chain Bag 19 = On Top of Dredge or Dredge Frame 20 = Caught in Dredge Frame or Between Bails 21 = Caught Inside Dredge in Twine Top 22 = Caught on Sweep/Tickler/Rock Chains 23 = Caught in Bridles/Cables/Warp 24 = Inside Mouth of Trawl Net 25 = Inside Belly of Trawl Net 26 = Inside Codend of Trawl Net 27 = Caught in Sweep or Footrope of Trawl Net 28 = Contact with Vessel or Vessel Equipment other than Fishing Gear 29 = Entangled in Gear other than Vessel's Fishing Gear (e.g. Ghost Gear Caught by Vessel) 99 = Other NOTE: If more than one code applies to a situation choose the code that describes the primary entanglement/interaction (e.g. a turtle is observed inside the twine top of a dredge and falls from the gear as it is hauled up - choose code 21 as it best describes the primary interaction). | ANIMAL CONDITION CODES (when released): 00 = Unknown 01 = Alive, Condition Unknown 02 = Alive, Not Injured 03 = Alive, Injured 04 = Alive, Gear In/Around Mouth 05 = Alive, Gear In/Around Flipper 06 = Alive, Gear In/Around Another Single Body Part 07 = Alive, Gear In/Around Several Body Parts 08 = Alive, Seen by Captain/Crew ONLY 09 = Alive, resuscitated (turtle) 10 = Dead, Condition Unknown 11 = Dead, Fresh 12 = Dead, Moderately Decomposed 13 = Dead, Severely Decomposed 14 = Dead, Seen by Capt/Crew ONLY |
| TAG CODES: 0 = Unknown 1 = Tag Applied by Observer 2 = No Tag(s) 3 = Tag Already Present, Left On 4 = Tag Already Present, Removed NOTE: Record Turtle Pit Tags on the Sample Log. | | |
| ADDITIONAL COMMENTS | | |

As of August, 2003 Transit Watches are no Longer Conducted

MARINE MAMMAL, SEA TURTLE, AND DEBRIS SIGHTING LOG

The purpose of this log is to record all marine mammal, sea turtle, and debris sightings. Also, the observer records sighting effort (time spent looking) for transit watches, including time when no sightings are made. This information is critical in determining the temporal and spatial distribution of these animals and debris, and the relative abundance and behavior of animals in the vicinity of fishing operations. Sea bird sightings are not recorded here.

The types of sightings and watches, and the proper procedures for conducting each type of watch are described in the Marine Mammal, Sea Turtle and Debris Watches section of the NEFSC Observer Program Training Manual.

Each time a transit watch is conducted, this effort must be recorded on the log with a "begin" watch and "end" watch record (see EVENT TYPE codes, #3). Begin and end watch times must be at least one minute apart. A sighting of a marine mammal, sea turtle or debris may **NOT** be recorded in the same record as a "begin" or "end" watch record. For gillnet fisheries, **do not record begin and end haul watch information** as this information is already recorded on the Gillnet Haul Log.

An animal must not be recorded on both the Marine Mammal, Sea Turtle, and Debris Sighting Log **and** the Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log. See the Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log in the NEFSC Observer Program Manual for more detailed instructions on deciding when an animal is a sighting versus an incidental take. An animal determined to be an incidental take is recorded on the Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log.

Any **debris caught during a haul** is recorded on the Haul Log (or the Individual Animal Log in pelagic fisheries) and not on this log.

INSTRUCTIONS

For instructions on completing fields **A-C** refer to the Common Haul Data section of the NEFSC Observer Program Manual.

1. TODAY'S DATE: Record the month, day, and year that the event being described occurred.

Example: 03/20/01.

EVENT INFORMATION

2. TIME: Record the local time using the 24 hour clock (0000-2359) that the event being described occurred.

Example: 20:32.

3. TYPE CODE: Indicate the type of event that occurred by recording the most appropriate two digit code:

For Watches Only - When a marine mammal, sea turtle, and debris watch is conducted, record one of the following begin/end watch event type codes:

- 01 = Begin transit watch.
- 02 = End transit watch.
- 03 = Begin set watch.
- 04 = End set watch.
- 05 = Begin haul watch.
- 06 = End haul watch.

NOTE: For gillnet fisheries, **do not record begin and end haul watch information** as this information is already recorded on the Gillnet Haul Log.

For Sightings Only - When a marine mammal, sea turtle, or debris sighting is made, record one of the following sighting event type codes to indicate whether the observer is on- or off-effort, and to best describe the vessel activity at the time the sighting was made:

- 08 = On-effort, during dedicated watch.
- 10 = Off-effort, vessel activity unknown.
- 11 = Off-effort, vessel stop/anchor/drift.
- 12 = Off-effort, sitting on gear.
- 13 = Off-effort, transiting or searching.
- 14 = Off-effort, towing gear.
- 15 = Off-effort, hauling in gear.
- 16 = Off-effort, setting out gear.
- 17 = Off-effort, waiting for J/V transfer.
- 18 = Off-effort, taking J/V transfer.

NOTE: If the sighting is made during a watch,

the sighting event code is always “On-effort, during dedicated watch” (08).

General:

00 = Unknown.

99 = Other, describe the event type in COMMENTS.

NOTE: Use code 99 to describe dedicated sighting activity outside of the specified watches.

4. POSITION CODE: Indicate the location and position of the observer on the vessel at the time of this event by recording the most appropriate one digit code:

00 = Unknown.

01 = Bow, facing forward.

02 = Wheelhouse, facing forward.

03 = Wheelhouse, facing backward.

04 = Work deck, facing backward.

05 = Work deck, facing sideways.

06 = Starboard side, facing net.

07 = Port side, facing net.

99 = Other, describe the position in COMMENTS.

NOTE: If the sighting is not seen by the observer, record “Other” (99), and describe in COMMENTS.

5. HAUL NUMBER: Record the haul number assigned to the haul in which any on-effort events or off-effort sightings occurred between the beginning and end of a haul. This number must agree with the number recorded for this haul on the corresponding Haul Log.

NOTE: If the event does not occur during a haul, record a dash (-).

6. LATITUDE/LONGITUDE OR LORAN: Record the latitude and longitude location, to the tenth of a minute, where the event occurred. If the latitude and longitude location is given in seconds, convert them to tenths of minutes. If latitude and longitude positions are not available, record the LORAN stations and bearings.

NOTE: See Appendix Q. Conversion Tables for a list of second ranges and corresponding conversions to tenths of minutes.

NOTE: If **neither** latitude/longitude or LORAN positions are available, record the statistical area as listed in Appen-

dix E.1. Map of Statistical Areas of the Northeast U.S. or Appendix E.2. Map of Statistical Areas of the Southeast U.S.

Example: 35 23.4 75 16.7 or
9960X 27054 9960Y 41824

NOTE: While **9960-**loran chains are the most frequently used chains within this program's jurisdiction, in extreme northern and southern areas other chains may be used, such as:

Southern North Carolina: **7980-**

Canadian: **5930-**

7. WEATHER CODE: Indicate the weather at the time the event occurred by recording the most appropriate two digit code listed in Appendix K. Weather Codes.

8. WAVE HEIGHT: Record, in whole feet, the wave height at the time the event occurred. If the wave height is less than six inches, record “0”.

NOTE: This is **not** a range.

9. COMMENTS?: Indicate whether there is a comment associated with this event by recording the appropriate code:

0 = No.

1 = Yes.

IF THE EVENT RECORDED IS A MARINE MAMMAL, SEA TURTLE, OR DEBRIS SIGHTING, COMMENTS MUST BE INCLUDED. COMMENTS are recorded on the Marine Mammal, Sea Turtle, and Debris Sighting Comments Log. Each event has a unique EVENT TIME per day. Care should be taken to correctly record the matching EVENT TIME on both logs.

Sighting comments should include all field characteristics **actually seen** by the observer and used to make an identification of the animal. Any unusual marks, scars or coloration on the animal(s) should be noted. Size of animal(s) should be included if an estimation is possible. Record ranges of the number of animals sighted, including the number of calves. Behaviors of the animal(s) sighted should be included, such as swim speed and direction and any other activities noted while the animal(s) was (were) observed.

Observed associations with other vessels, marine

life or oceanographic phenomena (*i.e.* wind rows, current lines, flotsam, jetsam or a dramatic change of water color in the immediate area) should also be included. If photographs were taken, record the ROLL NUMBER and FRAME NUMBERS.

It is important to document any marine debris, whether in the area of animals or not. The debris and its approximate size(s) should be described in general terms, *e.g.*, plastic sheeting 1 meter square, trawl webbing 0.5(m) X 3.0(m), *etc.* If derelict gear is picked up on purpose to be disposed of properly, take photographs and record in COMMENTS any marine life that may be entangled. Debris entanglement and ingestion have been documented as sources of mortality for marine mammals, sea turtles, sea birds, fish, and shellfish (Shomura and Yoshida 1985). Sea turtles often utilize large pieces of debris for shelter.

SIGHTING INFORMATION

NOTE: If the record or event being recorded is not a sighting, leave the following fields (#10-#15) blank.

10. SPECIES NAME: Record the complete common name of each marine mammal, sea turtle, or debris sighted, as listed in Appendix A. Species Names.

NOTE: If it is not possible to make a positive species identification, identify the animal to the most specific generic group of which you are positive, *i.e.* baleen whale, unidentified dolphin, seal, sea turtle, *etc.* **DO NOT GUESS AT SPECIES IDENTIFICATION.**

Examples: Unidentified Whale.
Harbor Porpoise.

11. SPECIES CODE: Leave this field blank.

12. NUMBER OF ANIMALS: Record the number of animals sighted. **Do not record a range.**

NOTE: If the sighting is debris, record a dash (-) in this field.

13. SIGHT CUE CODE: Indicate how the sighting was **first** detected by recording the most appropriate one digit code:

- 0 = Unknown.
- 1 = Sighted with naked eye.

- 2 = Sighted with binoculars.
- 3 = First sighted by captain or crew, then by observer.
- 4 = Sighted by captain or crew **ONLY**.
- 9 = Other, describe the sight cue in COMMENTS.

14. ANIMAL CONDITION CODE: Indicate the condition of the animal(s) sighted by recording the most appropriate two digit code:

- 00 = Unknown, explain why you can not identify the animal condition in COMMENTS.
- 01 = Alive, condition unknown.
- 02 = Alive, not injured.
- 03 = Alive, injured, describe how the animal is injured in COMMENTS.
- 04 = Alive, hook/gear in/around mouth, attempt to determine where in the mouth the hook is, *etc.* and describe in COMMENTS.
- 05 = Alive, hook/gear in/around flipper, *i.e.* hook in the flipper or gear around the flipper.
- 06 = Alive, hook/gear in/around another single body part, *i.e.* hook in the neck or plastron; specify which in COMMENTS.
- 07 = Alive, hook/gear in/around several body parts, describe more fully in COMMENTS.
- 08 = Alive, seen by captain and/or crew **ONLY**.
- 10 = Dead, condition unknown.
- 11 = Dead, fresh.
- 12 = Dead, moderately decomposed.
- 13 = Dead, severely decomposed.
- 14 = Dead, seen by captain and/or crew **ONLY**.

NOTE: Codes 04-07 exist primarily to improve descriptions of sea turtles. However, these codes may be used, as appropriate, for other animals.

NOTE: If the sighting is debris, leave this field blank.

15. ANIMAL BEHAVIOR CODE: Indicate the **initial** behavior of the animal(s) when first sighted by recording the most appropriate two digit code:

- 00 = Unknown.
- 01 = Near gear, physical contact.
- 02 = Near gear, within 50 meters.
- 03 = Near gear, within 51 to 150 meters.
- 04 = Feeding on catch.

- 05 = Porpoising: the animal(s) is (are) splashing along at the surface, breaking the surface regularly, showing most of the body.
- 06 = Bow riding: the animal(s) is (are) observed keeping pace with the vessel on the bow wave.
- 07 = Breaching: the animal(s) emerge(s) from the water and crash(es) down on a flank, back or belly.
- 08 = Swimming at surface: the animal(s) is (are) observed several times surfacing 'normally', each surfacing at some irregular distance from the previous one; it (they) appear(s) to be just moving along.
- 09 = Milling: the animal(s) is (are) rolling at the surface with no direction, making short dives without moving along. Often a group activity.
- 10 = Motionless at surface (or dead).
- 11 = Vessel avoidance: the animal(s) abruptly change(s) its (their) swimming direction or behavior to avoid the vessel; a startling, alarming, fleeing reaction.
- 12 = Vessel attraction: the animal(s) change(s) its (their) swimming direction to approach the vessel, such as a pod of dolphins purposefully heading toward the vessel to bowride.
- 99 = Other, describe the animal behavior in COMMENTS.

NOTE: If the animal(s) exhibit(s) multiple behaviors, record the code for the **initial behavior** only, and describe all subsequent behaviors in COMMENTS. If **multiple initial** animal behaviors exist for one sighting, record the lowest numerical code which applies, and record the other behaviors in COMMENTS.

NOTE: If there are a large number of animals (same species) that appear to be in a cohesive group, record the **initial behavior** of the majority of the animals. If a large number of animals (same species) appear to be in distinct groups behaving differently, record each group as a separate sighting.

NOTE: If the sighting is debris, leave this field blank.

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NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL, SEA TURTLE, AND DEBRIS SIGHTING LOG (Front)**

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| PAGE # | C OF |
| TODAY'S DATE mm/dd/yy | / 1 / |

| EVENT TIME 24 hours | EVENT TYPE CODE | POSN CODE | HAUL NUM | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | WEA- THER CODE | WAVE HGT ft | COMM- ENTS? 0=N,1=Y | SPECIES | | #ANIM | SIGHT CUE CODE | ANIM COND CODE | ANIM BEHVR CODE |
|---------------------------|-----------------------|--------------|-------------|--|--------------------|-----------|---------------------|----------------------|-------------------|---------------------------|---------|------|-------|----------------------|----------------------|-----------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | | | | NAME | CODE | | | | |
| 2 | 3 | 4 | 5 | 9960- | 6 | 9960- | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |

EVENT TYPE CODES:

WATCH ONLY

01 = Begin transit watch
02 = End transit watch
03 = Begin set watch
04 = End set watch
05 = Begin haul watch
06 = End haul watch

GENERAL

00 = Unknown
99 = Other

SIGHTING ONLY

08 = On-effort, during dedicated watch
10 = Off-effort, vessel activity unknown
11 = Off-effort, vessel stop/anchor/drift
12 = Off-effort, sitting on gear
13 = Off-effort, transiting or searching
14 = Off-effort, towing gear
15 = Off-effort, hauling in gear
16 = Off-effort, setting out gear
17 = Off-effort, waiting for J/V transfer
18 = Off-effort, taking J/V transfer

POSITION CODES:

00 = Unknown

01 = Bow, facing forward
02 = Wheelhouse, facing forward
03 = Wheelhouse, facing backward
04 = Work deck, facing backward
05 = Work deck, facing sideways
06 = Starboard side, facing net
07 = Port Side, facing net
99 = Other

SIGHT CUE CODES:

0 = Unknown

1 = Sighted with naked eye
2 = Sighted with binoculars
3 = First sighted by capt/crew,
then by observer
4 = Sighted by capt/crew ONLY
9 = Other

ANIMAL CONDITION CODES:

00 = Unknown

01 = Alive, condition unknown
02 = Alive, not injured
03 = Alive, injured
04 = Alive, gear in/around mouth
05 = Alive, gear in/around flipper
06 = Alive, gear in/around another body part
07 = Alive, gear in/around several body parts
08 = Alive, seen by captain/crew ONLY
10 = Dead, condition unknown
11 = Dead, fresh
12 = Dead, moderately decomposed
13 = Dead, severely decomposed
14 = Dead, seen by captain/crew ONLY

ANIMAL BEHAVIOR CODES:

00 = Unknown

01 = Near gear, physical contact
02 = Near gear, within 50 meters
03 = Near gear, with. 51-150 meters
04 = Feeding on catch
05 = Porpoising
06 = Bow riding
07 = Breaching
08 = Swimming at surface
09 = Milling
10 = Motionless at surface
11 = Vessel avoidance
12 = Vessel attraction
99 = Other

01/01/01 OBSIG

NMFS FISHERIES OBSERVER PROGRAM

MARINE MAMMAL, SEA TURTLE, AND DEBRIS SIGHTING LOG (Back)

| | |
|-----------------------|--------------|
| OBS/TRIP ID | A |
| DATE LAND mm/yy | B / |
| PAGE # | C OF |
| TODAY'S DATE mm/dd/yy | / 1 / |

| EVENT TIME 24 hrs | COMMENTS | EVENT TIME 24 hrs | COMMENTS |
|-------------------------|----------|-------------------------|----------|
| 2 | 9 | | |

| | |
|-----------------------|--------------|
| OBS/TRIP ID | A74010L |
| DATE LAND mm/yy | 01 / 01 |
| PAGE # | 1 OF 2 |
| TODAY'S DATE mm/dd/yy | 01 / 05 / 01 |

01/01/01 OBSIG

NMFS FISHERIES OBSERVER PROGRAM
MARINE MAMMAL, SEA TURTLE, AND DEBRIS SIGHTING LOG (Front)

| EVENT TIME 24 hours | EVENT TYPE CODE | POSN CODE | HAUL NUM | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | WEA- THER CODE | WAVE HGT ft | COMM- ENTS? 0=N,1=Y | SPECIES | | #ANIM | SIGHT CUE CODE | ANIM COND CODE | ANIM BEHVR CODE |
|---------------------------|-----------------------|--------------|-------------|--|--------------------|-----------|---------------------|----------------------|-------------------|---------------------------|--------------------|------|-------|----------------------|----------------------|-----------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | | | | NAME | CODE | | | | |
| 10:10 | 08 | 06 | 3 | 9960- | 42 24.3 | 9960- | 70 41.2 | 03 | 4 | 1 | Whitesided dolphin | | 22 | 1 | 02 | 05 |
| 10:11 | 08 | 06 | 3 | 9960- | 42 24.7 | 9960- | 70 41.2 | 03 | 4 | 1 | Humpback whale | | 1 | 1 | 02 | 08 |
| 11:14 | 13 | 02 | - | 9960- | 42 25.1 | 9960- | 70 40.3 | 03 | 4 | 1 | Finback whale | | 3 | 2 | 02 | 08 |
| 15:00 | 01 | 02 | - | 9960- | 42 25.4 | 9960- | 70 50.2 | 03 | 4 | 0 | | | | | | |
| 15:40 | 02 | 02 | - | 9960- | 42 31.6 | 9960- | 70 52.0 | 03 | 4 | 1 | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|
| EVENT TYPE CODES: | | | | POSITION CODES: | | | | SIGHT CUE CODES: | | | | ANIMAL CONDITION CODES: | | | | ANIMAL BEHAVIOR CODES: | |
| WATCH ONLY 01 = Begin transit watch 02 = End transit watch 03 = Begin set watch 04 = End set watch 05 = Begin haul watch 06 = End haul watch GENERAL 00 = Unknown 99 = Other | | | | 00 = Unknown 01 = Bow, facing forward 02 = Wheelhouse, facing forward 03 = Wheelhouse, facing backward 04 = Work deck, facing backward 05 = Work deck, facing sideways 06 = Starboard side, facing net 07 = Port Side, facing net 99 = Other | | | | 0 = Unknown 1 = Sighted with naked eye 2 = Sighted with binoculars 3 = First sighted by capt/crew, then by observer 4 = Sighted by capt/crew ONLY 9 = Other | | | | 00 = Unknown 01 = Alive, condition unknown 02 = Alive, not injured 03 = Alive, injured 04 = Alive, gear in/around mouth 05 = Alive, gear in/around flipper 06 = Alive, gear in/around another body part 07 = Alive, gear in/around several body parts 08 = Alive, seen by captain/crew ONLY 10 = Dead, condition unknown 11 = Dead, fresh 12 = Dead, moderately decomposed 13 = Dead, severely decomposed 14 = Dead, seen by captain/crew ONLY | | | | 00 = Unknown 01 = Near gear, physical contact 02 = Near gear, within 50 meters 03 = Near gear, with 51-150 meters 04 = Feeding on catch 05 = Porpoising 06 = Bow riding 07 = Breaching 08 = Swimming at surface 09 = Milling 10 = Motionless at surface 11 = Vessel avoidance 12 = Vessel attraction 99 = Other | |

01/01/01 OBSIG

NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL, SEA TURTLE, AND DEBRIS SIGHTING LOG (Back)**

| | |
|-----------------------|--------------|
| OBS/TRIP ID | A74010L |
| DATE LAND mm/yy | 01 / 01 |
| PAGE # | 2 OF 2 |
| TODAY'S DATE mm/dd/yy | 01 / 05 / 01 |

| EVENT TIME 24 hrs | COMMENTS | EVENT TIME 24 hrs | COMMENTS |
|-------------------------|---|-------------------------|---|
| 1010 | Whitesided dolphins ided by white patch on hind flank, black eye patch and short snout. Two calves were in group. Porpoising along behind another fishing vessel that was steaming to the northeast. | 15:40 | Transit watch ended within half an hour of harbor. Fish sampling was done in time to do a transit watch. No animals were seen. |
| 1011 | Photographed the underside of flukes (see photo log). Flukes had white pattern, scalloped edge. Saw long, white pectoral flippers through the water. As we were hauling in gear, the whale approached the vessel within 250 meters and lifted its flukes when it dove. | | |
| 1114 | Three finback whales were sighted in the distance. Tall blows. Swimming rapidly, headed along one direction. | | |

01/01/01 OBSIG

NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL, SEA TURTLE, AND DEBRIS SIGHTING LOG (Front)**

| | |
|-----------------------|-----|
| OBS/TRIP ID | |
| DATE LAND mm/yy | / |
| PAGE # | OF |
| TODAY'S DATE mm/dd/yy | / / |

| EVENT TIME 24 hours | EVENT TYPE CODE | POSN CODE | HAUL NUM | LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) | | | | WEA- THER CODE | WAVE HGT ft | COMM- ENTS? 0=N,1=Y | SPECIES | | #ANIM | SIGHT CUE CODE | ANIM COND CODE | ANIM BEHVR CODE |
|---------------------------|-----------------------|--------------|-------------|--|--------------------|-----------|---------------------|----------------------|-------------------|---------------------------|---------|------|-------|----------------------|----------------------|-----------------------|
| | | | | Station 1 | Latitude / Bearing | Station 2 | Longitude / Bearing | | | | NAME | CODE | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |
| : | | | | 9960- | | 9960- | | | | | | | | | | |

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SIGHTING ONLY

08 = On-effort, during dedicated watch
10 = Off-effort, vessel activity unknown
11 = Off-effort, vessel stop/anchor/drift
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13 = Off-effort, transiting or searching
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12 = Vessel attraction
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01/01/01 OBSIG

NMFS FISHERIES OBSERVER PROGRAM

MARINE MAMMAL, SEA TURTLE, AND DEBRIS SIGHTING LOG (Back)

| | |
|-----------------------|-----|
| OBS/TRIP ID | |
| DATE LAND mm/yy | / |
| PAGE # | OF |
| TODAY'S DATE mm/dd/yy | / / |

| EVENT TIME 24 hrs | COMMENTS | EVENT TIME 24 hrs | COMMENTS |
|-------------------------|----------|-------------------------|----------|
| | | | |

PHOTO LOG

The purpose of this log is to document all photographs taken during a trip, including the **photographs required of each marine mammal, sea turtle, and sea bird taken in the vessel's gear**. In addition to incidental takes, photographs should be taken of sharks, sturgeons, rays, and any rare or hard-to-identify fish. Photographs are an important part of the identification process. Not only do they aid in the distinction between species, but in marine mammals, they also help in the determination of sex.

The exposed disposable camera or roll of film must be labelled clearly with trip identifiers, dates landed, and roll number. Complete a new log for each disposable camera or roll of film used. A copy of this log must accompany every camera/roll forwarded for processing. If there is more than one trip on the same camera/roll, a photocopy of this log must be included in each trip's data.

If lighting conditions permit, shoot a series of photographs depicting the vessel's gear types, fishing operations, and/or observer duties. These subjects are very useful for observer training. However, for confidentiality purposes, photographs should not be taken of vessel names, vessel numbers, or crew members.

When photographing incidental takes of marine mammals, sea turtles, and sea birds, photograph any unusual marks and scars, location of gear entanglement (preferably with gear still attached), and characteristics of the animal which can be used for species identification (reference outline below). Place a piece of paper with the observer/trip identifier, the animal's tag number, and the date on it next to the animal's body, and include it in every photo. Do not cover important features of the animal's body with the paper. If the paper is wet down, it will be less apt to blow away. If time/conditions preclude this, try to include the carcass tag (with the tag number showing) in the photograph.

Even if you are able to identify a species, photograph the animal, especially if the specimen cannot be frozen and brought back whole. The photos will be reviewed by experts for positive identification. Include an object in the photograph, *i.e.* a shoe, clipboard, pen, or the carcass tag, to indicate the relative size of the animal. In order to make the most of the photographs

taken, use the following guidelines. This is especially important for hard-to-identify species.

MARINE MAMMALS: Photograph the head and body of each marine mammal individually. Additionally:

Whales: close-up of head (side-angle or top-angle), flipper and dorsal fin position & shape, fluke shape.
Right Whales: callosity photos.
Humpback Whales: ventral fluke photo, if possible.
Belly-up floaters: photo of the throat or belly grooves, or absence thereof.

Dolphins/

Porpoises: close-up of head (side-angle), coloration pattern on side, distinctive blazes or stripes, shape of dorsal fin (side-angle).

Seals: whole body from above, head on; whole body from the side; whole underside; head profile (side-angle), rear flippers; back coloration pattern.

SEA TURTLES: Photograph the both the carapace and the plastron of each turtle individually. Additionally, photograph the head shape (top-angle), and obtain a close-up of the head (top- and side-angles).

SEA BIRDS: Photograph each sea bird individually when possible, or grouped when there are many.

SHARKS: Photograph the head shape, mouth and under side of snout and gills, and placement of all fins (preferably before being cut off).

STURGEONS: Photograph the head, mouth and underside of snout, barbel length. Additionally, photograph the anal region to show presence or absence of anal scutes.

OTHER FISH/RAYS/CRUSTACEANS: Refer to Peterson's field guides for identifying characteristics of that species type. The guides' drawings indicate important features with small arrows.

If photographing multiple-day trips (trips lasting for more than one day), do not photograph more than one trip per roll of film. Preferably, use the 35 mm cameras, and not disposable cameras, on multiple-day trips. If there are a few shots left on the roll at the end of the trip, cover the lens and use up the film so that it may be removed from the camera.

If photographing day trips (trips which go out and return on the same day), up to four trips may be photographed on the same disposable camera or roll of film. Place a spacer photograph between each trip. This can be accomplished by placing your hand over the lens or taking a photograph of the deck, water, *etc.* Every trip on the camera/roll must be recorded in the Header section, and the corresponding frame numbers for each trip should be clearly indicated.

Keep cameras and film away from excessive heat, moisture, salt, and vapors. Don't keep partially used rolls of film or disposable cameras for extended periods. Exposed color film is more susceptible to harmful influences than unexposed film, and should be forwarded for processing as soon as possible.

INSTRUCTIONS

For instructions on completing the Header fields **A** and **B**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. GEAR TYPE(S): Record, in text, the type of gear used by the vessel during the trip(s) as recorded on the Vessel and Trip Information Log. If it is a multiple gear trip, record all gear types used on the trip.

Example: Pelagic Longline.

2. CAMERA/ROLL NUMBER: Record the number you assign to the disposable camera or roll used. Start with "1" for the first camera/roll used on this trip, and continue numbering sequentially throughout the trip for the following cameras/rolls used on this trip. When a new trip is started (with a new roll of film), start numbering again with "1".

PHOTO INFORMATION

3. FRAME NUMBER: Preprinted frame numbers are provided on the log. Record the photograph subject on the line with the corresponding frame number. The frame number is displayed on the camera.

NOTE: Disposable cameras display the number of photographs remaining in the camera after you take the photo. Therefore, for disposable cameras, record your first photo at FRAME NUMBER 23 (or FRAME NUMBER 26, for 27 exposure cameras) and continue listing up to 0.

NOTE: For 35 mm cameras, begin listing photos at FRAME NUMBER 1 and continue listing down to 24 or 25.

4. HAUL NUMBER: Record the haul number assigned to the haul in which the photo is taken, or which corresponds to the animal being photographed, if applicable. This number must agree with the number recorded for this haul on the corresponding Haul Log.

5. TAG NUMBER(S): Record the **complete alphanumeric number** of the tag(s) that the observer attaches to the animal(s) being photographed and/or that are already on the animal(s) when taken. The tag number(s) recorded on this log must agree with the tag number(s) recorded for this animal on the Individual Animal Log, or the Marine Mammal, Sea Turtle, and Sea Bird Incidental Take Log.

6. SUBJECT: Briefly describe the species or subject, and/or the important feature(s) in the photograph, on the line corresponding to the preprinted frame number.

Example: Harbor Porpoise head shot showing scars.

7. OBS/TRIP ID: Record your three character Observer Identifier combined with the three character Trip Number and one character Trip Extension assigned to you for this trip.

8. DATE: Record the month, day, and year that this photo is taken.

**NMFS FISHERIES OBSERVER PROGRAM
PHOTO LOG**

| OBS/TRIP ID(S) A | | | DATE(S) LANDED B | GEAR TYPE(S) 1 | CAM/ROLL # 2 |
|----------------------------|--------------------|---------------------------|--|--------------------------|---------------------------|
| FRAME # 3 | HAUL # 4 | TAG NUMBER(S) 5 | SUBJECT/ POINT OF INTEREST 6 | OBS/TRIP ID 7 | DATE mm/dd/yy 8 |
| 0 | | | | | / / |
| 1 | | | | | / / |
| 2 | | | | | / / |
| 3 | | | | | / / |
| 4 | | | | | / / |
| 5 | | | | | / / |
| 6 | | | | | / / |
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| 21 | | | | | / / |
| 22 | | | | | / / |
| 23 | | | | | / / |
| 24 | | | | | / / |
| 25 | | | | | / / |
| 26 | | | | | / / |

Note: For disposable cameras, record the first picture taken on either FRAME #23 (24 exposure cameras) or FRAME #26 (27 exposure cameras). For 35 mm cameras, begin with FRAME #1.

**NMFS FISHERIES OBSERVER PROGRAM
PHOTO LOG**

| OBS/TRIP ID(S) E66001- E66002L E66004- | | | DATE(S) LANDED 02/05/01 02/07/01 04/13/01 | GEAR TYPE(S) Otter Trawl, Sink Gillnet, Otter Trawl | CAM/ROLL # 1 |
|---|--------|---------------|--|---|-----------------|
| FRAME # | HAUL # | TAG NUMBER(S) | SUBJECT/ POINT OF INTEREST | OBS/TRIP ID | DATE mm/dd/yy |
| 0 | | | | | / / |
| 1 | 2 | | Setting Gear | E66001- | 02 / 05 / 01 |
| 2 | 2 | | Hauling Gear | E66001- | 02 / 05 / 01 |
| 3 | 4 | | Large Cod and Fish, NK | E66001- | 02 / 05 / 01 |
| 4 | 4 | | Whale Bone | E66001- | 02 / 05 / 01 |
| 5 | | | spacer | | / / |
| 6 | | | Sighting - Pilot Whales | E66002L | 02 / 07 / 01 |
| 7 | | | Sighting - Pilot Whales | E66002L | 02 / 07 / 01 |
| 8 | | | Sighting - Pilot Whales | E66002L | 02 / 07 / 01 |
| 9 | 3 | D03254 | Harbor Porpoise, side shot | E66002L | 02 / 07 / 01 |
| 10 | 3 | D03254 | Harbor Porpoise, sex shot | E66002L | 02 / 07 / 01 |
| 11 | 3 | D03254 | Harbor Porpoise, head | E66002L | 02 / 07 / 01 |
| 12 | 3 | D03254 | Harbor Porpoise, net marks | E66002L | 02 / 07 / 01 |
| 13 | | | Gillnet Gear | E66002L | 02 / 07 / 01 |
| 14 | 7 | | Processed Dogfish | E66002L | 02 / 07 / 01 |
| 15 | | | spacer | | / / |
| 16 | | | Sighting - Gannets | E66004- | 04 / 13 / 01 |
| 17 | 2 | | Illex Squid Catch | E66004- | 04 / 13 / 01 |
| 18 | 2 | | Illex Squid Catch | E66004- | 04 / 13 / 01 |
| 19 | 3 | M235458 | Blue Shark, head | E66004- | 04 / 13 / 01 |
| 20 | 3 | M235458 | Blue Shark, side shot with tag | E66004- | 04 / 13 / 01 |
| 21 | | | | | / / |
| 22 | | | | | / / |
| 23 | | | | | / / |
| 24 | | | | | / / |
| 25 | | | | | / / |
| 26 | | | | | / / |

Note: For disposable cameras, record the first picture taken on either FRAME #23 (24 exposure cameras) or FRAME #26 (27 exposure cameras). For 35 mm cameras, begin with FRAME #1.

12/01/03

**NMFS FISHERIES OBSERVER PROGRAM
PHOTO LOG**

| OBS/TRIP ID(S) | | | DATE(S) LANDED | GEAR TYPE (s) | CAM/ROLL # |
|----------------|--------|---------------|----------------------------|---------------|---------------|
| FRAME # | HAUL # | TAG NUMBER(S) | SUBJECT/ POINT OF INTEREST | OBS/TRIP ID | DATE mm/dd/yy |
| 0 | | | | | / / |
| 1 | | | | | / / |
| 2 | | | | | / / |
| 3 | | | | | / / |
| 4 | | | | | / / |
| 5 | | | | | / / |
| 6 | | | | | / / |
| 7 | | | | | / / |
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| 21 | | | | | / / |
| 22 | | | | | / / |
| 23 | | | | | / / |
| 24 | | | | | / / |
| 25 | | | | | / / |
| 26 | | | | | / / |

Note: For disposable cameras, record the first picture taken on either FRAME #23 (24 exposure cameras) or FRAME #26 (27 exposure cameras). For 35 mm cameras, begin with FRAME #1.

INDIVIDUAL ANIMAL LOG

This log should only be used under the following circumstances:

- In gillnet fisheries, except the pelagic drift gillnet fishery, to record all pelagics, sturgeons, and tagged fish EXCEPT:

- bonito,
- skipjack tuna,
- false albacore and
- king mackerel.

These species should be recorded on the Gillnet Haul Log.

- In all other fisheries, record only pelagics, sturgeons, and tagged fish caught in a particular haul. It is important to ensure that a weight is recorded for **every** animal (except chunked fish carcasses and only heads of animals).
- In all fisheries, record incidental catches of **terrapins** on this log. These animals are not recorded on a Marine Mammal, Sea Turtle and Sea Bird Incidental Take Log.

Any animal recorded on this log should NOT also be recorded in the Haul Log Species Summary section.

“Pelagics” include, but are not limited to:

| | | | |
|-----------|----------|--------|-----------------|
| Swordfish | Billfish | Sharks | Atl. Needlefish |
| Tuna | Bonito | Rays | Cutlassfish |
| Wahoo | | | |

See Appendix R. Species List and Corresponding Logs for a list of species and the log(s) on which to record them.

INSTRUCTIONS

For instructions on completing the Header fields **A**, **B** and **C**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. HAUL NUMBER: Record the consecutive haul number assigned to the haul being sampled. This number must agree with the haul number recorded on the corresponding Haul Log.

2. GEAR NUMBER: Record the gear number assigned to this uniquely identified gear as specified on the corresponding Gear Characteristics Log.

3. SEQUENCE NUMBER: Consecutive numbers are assigned to each animal or debris item recorded on this log. If there are insufficient lines on one form, continue listing items on an additional Individual Animal Log, making sure to fill in the preceding number.

4. SPECIES NAME: Record the **complete** common name of each species/animal or debris item to record on this log, as listed in Appendix A. Species Names.

Examples: Swordfish.
Yellowfin Tuna.

5. SPECIES CODE: Leave this field blank.

6. INITIAL STATUS: Indicate the status of each animal caught as it comes up, whether it is brought onboard or not, by recording the appropriate one digit code:

| | | |
|---|---|------------------|
| 0 | = | Unknown. |
| 1 | = | Alive. |
| 2 | = | Dead. |
| 3 | = | Dead, Damaged. |
| 4 | = | Dead, Head Only. |

7. END STATUS: Indicate the final status of each animal caught, whether it is brought onboard or not, by recording the appropriate one digit code:

| | | |
|---|---|------------------|
| 0 | = | Unknown. |
| 1 | = | Alive. |
| 2 | = | Dead. |
| 3 | = | Dead, Damaged. |
| 4 | = | Dead, Head Only. |

8. FISH DISPOSITION: Indicate the disposition of each animal or item listed in SPECIES NAME (#4) by the vessel by recording the most appropriate three digit code listed in Appendix B. Fish Disposition Codes.

Example: A 47 lb swordfish is discarded because regulations prohibit its retention because it's too small (012).

9. PROCESSING TYPE: Indicate the type of processing done to each animal by recording the appropriate two digit code:

- 00 = Unknown.
- 01 = No Processing.
- 02 = Chunked.
- 03 = Filleted.
- 04 = Dressed (Gutted Only).
- 05 = Dressed (Finned Only).
- 06 = Dressed (Headed and Gutted).
- 07 = Dressed (Headed, Gutted, and Finned).
- 08 = Dressed (Headed, Gutted, and Tailed).
- 09 = Dressed (Headed, Gutted, Finned, and Tailed).
- 99 = Other, specify in COMMENTS.

10. WEIGHT: Record the dressed or round, actual or estimated weight for each species/animal or debris item listed in SPECIES NAME (#4). In general, the types of weights the observer should be able to obtain are as follows:

Kept Pelagic Species: the dealer's actual dressed individual animal weight for those species tagged and carcass weights obtained dockside, i.e. swordfish, billfish, tuna, bonito, sharks, etc.

Discarded Pelagic Species: the observer's estimated round individual animal weight for those species discarded, i.e. swordfish, billfish, tuna, bonito, sharks, etc.

NOTE: Actual weights may be recorded to the nearest **tenth** of a pound if reasonable. Estimated weights greater than one pound should be recorded to the nearest whole pound.

NOTE: When a **shark is finned**, with the carcass discarded or kept, record the **carcass** and its corresponding length and dressed weight information on this log. Record a "D" for "dressed" in WEIGHT TYPE CLASSIFICATION (#11) and record the appropriate processing code for the shark carcass in PROCESSING TYPE (#9). Create a separate summary record, by species, on the corresponding Haul Log, for **kept fins**.

NOTE: When a **fish or shark is "upgraded"** or **"high graded"**, and a previously kept fish or shark is discarded and replaced with one that is larger (or of higher quality/value), record the discarded animal and a weight, and code it appropriately for FISH DISPOSITION (#8). Upgrading may result in dressed discard weights. Upgrading is typically done with swordfish and tuna, but may also occur with sharks and other fish.

NOTE: When a **fish or shark is filleted** on the vessel, record the round weight for the animal before filleting, as appropriate.

NOTE: Do not record any weight information for chunked fish or only heads of animals. Create a separate summary record, by species, on the corresponding Haul Log, for kept fish chunks.

NOTE: Do not record any weight information for terrapins.

WEIGHT TYPE CLASSIFICATION

11. DRESSED OR ROUND: Indicate whether the weight recorded in WEIGHT (#10) is a dressed or round weight by recording the appropriate letter code:

- D = Dressed.
- R = Round.

12. ACTUAL OR ESTIMATED: Indicate whether the weight recorded in WEIGHT (#10) is an actual or estimated weight by recording the appropriate letter code:

- A = Actual.
- E = Estimated.

13. TAG NUMBER(S): Record the complete alphanumeric numbers, with no spaces or hyphens, from the tag(s) that you attach, or that were already attached, to the animal. This number may be from:

a) a kept pelagic fish tagged by the observer with a carcass tag. This tag allows the observer to uniquely identify each kept fish carcass for the purpose of recording its actual, dressed weight at the dealer. Record the tag number as it appears on the carcass tag.

b) a **tag recaptured fish or shark**. Fish tag numbers are generally preceded by an "R"; shark tag numbers by an "M". If the animal is kept by the vessel, record both the recaptured animal tag number, **and** the carcass tag number in this field, and the correct TAG CODES (#14).

NOTE: For fish and shark tagging instructions, refer to the Tagging and Tag Recapture instructions in the NEFSC Observer Program Training Manual.

Examples: M145697, R324061

c) an **untagged fish or shark from which a biological sample is taken**. Record "SAM #" plus a consecutive number so the sample may be tracked to the animal record.

14. TAG CODE(S): Indicate the origin of the tag number(s) recorded above (#13), for each tag attached to the animal, by recording the appropriate one digit code:

- 0 = Unknown.
- 1 = Tag Applied by Observer.
- 2 = No Tag(s).
- 3 = Tag Already Present, Left On.
- 4 = Tag Already Present, Removed.
- 5 = Carcass Tagged.

NOTE: Use code 2 when no tag number was recorded; **do not leave this field blank**.

Use codes 1 - 4 for swordfish, billfish, tuna, and sharks released alive.

Use code 5 only for fish and sharks processed and weighed at the dealer.

INDIVIDUAL ANIMAL MEASUREMENTS

The following three fields are for length measurements for all **animals** brought on board. If time allows, two measurements should be made on each animal according to its type, i.e. swordfish, billfish, tuna,

bonito, shark, terrapin, etc...

The length measurements are listed across the form in order of priority. If time and/or fishing conditions preclude obtaining multiple measurements from each animal, it is important to collect at least one measurement, preferably STANDARD LENGTH #1 (#15), and sex from as many animals as possible. Do not try to piece animals together that have been cut up, but do try to record an ESTIMATED LENGTH (#17) for these animals.

Do not record any length information for only heads of animals.

All length measurements are recorded in whole centimeters.

15. STANDARD LENGTH #1: Record the measured length of the animal according to these standards:

Swordfish and Other Billfish (i.e. white marlin, blue marlin, sailfish, and spearfish): **Lower Jaw to Fork length (LJFL)** - tip of lower jaw to caudal fork of the tail (**curvilinear**).

Tunas and Bonito: **Fork Length (FL)** - tip of upper jaw to caudal fork of the tail (**straight**).

Sharks: **Fork Length (FL)** - tip of snout to caudal fork of the tail (**straight**).

Rays: **Total length (TL)** - tip of upper snout to end of the tail (**straight**).

Other Fish (i.e. sturgeon): **Fork length (FL)** - tip of upper snout to fork of the tail (**straight**).

Terrapins: **Total length (TL)** - nuchal notch to the posterior marginal **tip** (**curvilinear**).

16. STANDARD LENGTH #2: Record the measured length of the animal according to the standards listed below:

Swordfish: **Cleithrum to Keel length (CK)** - cleithral arch to the anterior rise of the caudal keel (**curvilinear**), i.e. where the external dark body pigment meets the white inner cleithrum membrane,

to the origin of the caudal keel (carcass length).

Billfish: **Pectoral to Fork length (PFL)** - anterior insertion of the pectoral fin to the caudal fork of the tail (**curvilinear**).

Tunas and Bonito: **Pectoral to Fork length (PFL)** - anterior insertion of the pectoral fin to the caudal fork of the tail (**straight**).

Sharks: **Total length (TL)** - tip of snout to the tip of the upper caudal lobe (**straight**).

Rays: **Disc Width (DW)** - tip of pectoral fin to tip of pectoral fin, across the widest point of the animal (**straight**).

Other Fish (i.e. sturgeon): **None**.

Terrapins: **Notch length (NL)** - nuchal notch to the posterior marginal notch (**curvilinear**).

17. ESTIMATED LENGTH: Record the estimated **straight** length of the animal according to the standards listed under STANDARD LENGTH #1 (#15) if the animal is not brought onboard or whole.

18. SEX: Indicate the sex of each animal, whether it is brought onboard or not (if possible) by recording the appropriate one digit code:

0 = Unknown.

1 = Male.

2 = Female.

NOTE: Leave this field blank when only the head of an animal is caught.

19. BIOLOGICAL SAMPLE TAKEN?: Indicate whether or not a biological sample was collected by recording the appropriate one digit code:

0 = No.

1 = Yes.

NOTE: Record the sample type in the COMMENT section of this log.

animal(s) sampled, *i.e.* processing types, biosamples taken, etc..., especially when data are unable to be collected. If more room is needed, use the back of this log, making sure to indicate "See Back" on the front. Reference each comment with its corresponding field name.

COMMENTS

Record any additional information regarding the

**NMFS FISHERIES OBSERVER PROGRAM
INDIVIDUAL ANIMAL LOG**

| | | |
|-----------------|----------|----|
| OBS/TRIP ID | A | |
| DATE LAND mm/yy | B | / |
| PAGE# | C | OF |
| HAUL # | 1 | |

| GEAR # | SEQ # | SPECIES | | INITIAL STATUS CODE | END STATUS CODE | FISH DISP CODE <small>In Appen</small> | PROC CODE | WEIGHT | | | TAG | | LENGTHS cm | | | SEX 0 = U 1 = M 2 = F | BIO-SAMP 0 = N 1 = Y |
|----------|----------|----------|--------------------------------|---------------------|-----------------|---|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|--------------------------------|----------------------------|
| | | NAME | CODE <small>(blank)</small> | | | | | POUNDS | MKT D/R | TYPE A/E | NUMBER(S) | CODE(S) | #1 | #2 | Est(#1) | | |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | |

COMMENTS

STATUS CODES:

0 = Unknown
1 = Alive
2 = Dead
3 = Dead, Damaged
4 = Dead, Head Only

PROCESSING CODES:

00 = Unknown
01 = No Processing
02 = Chunked
03 = Filleted
04 = Dressed (Gutted Only)
05 = Dressed (Finned Only)
06 = Dressed (Headed and Gutted)
07 = Dressed (Headed, Gutted, Finned)
08 = Dressed (Headed, Gutted, Tailed)
09 = Dressed (Headed, Gutted, Finned, Tailed)
99 = Other

WEIGHT MARKET CODES:

D = Dressed (1)
R = Round (2)

WEIGHT TYPE CODES:

A = Actual (1)
E = Estimated (2)

TAG CODES:

0 = Unknown
1 = Tag Applied by Observer
2 = No Tag(s)
3 = Tag Already Present, Left On
4 = Tag Already Present, Removed
5 = Carcass Tagged (Fish Only)

STANDARD LENGTHS:

| | # 1 | # 2 |
|---------------|------|------|
| Swordfish (c) | LJFL | CK |
| Billfish (c) | LJFL | PFL |
| Tuna | FL | PFL |
| Shark | FL | TL |
| Sturgeon | FL | None |
| Ray | TL | DW |
| Terrapin | TL | NL |
| Other | FL | None |

**NMFS FISHERIES OBSERVER PROGRAM
INDIVIDUAL ANIMAL LOG**

| | |
|-----------------|---------|
| OBS/TRIP ID | A74015C |
| DATE LAND mm/yy | 01/ 01 |
| PAGE# | 2 OF 5 |
| HAUL # | 1 |

| GEAR # | SEQ # | SPECIES | | INITIAL STATUS CODE | END STATUS CODE | FISH DISP CODE <small>In Appen</small> | PROC CODE | WEIGHT | | | TAG | | LENGTHS cm | | | SEX 0 = U 1 = M 2 = F | BIO-SAMP 0 = N 1 = Y |
|--------|-------|-------------------|-----------------|---------------------|-----------------|---|-----------|--------|---------|----------|----------------|---------|------------|-----|---------|--------------------------------|----------------------------|
| | | NAME | CODE (blank) | | | | | POUNDS | MKT D/R | TYPE A/E | NUMBER(S) | CODE(S) | #1 | #2 | Est(#1) | | |
| 1 | 0 1 | Swordfish | | 3 | 3 | 100 | 09 | 165 | D | A | A2999 | 5 | 193 | 106 | | 1 | 1 |
| 1 | 0 2 | Blue Shark | | 2 | 2 | 100 | 06 | 170 | D | A | M45392 / A2318 | 4 / 5 | 201 | 240 | | 2 | 1 |
| 1 | 0 3 | Atlantic Sturgeon | | 1 | 1 | 001 | 01 | 180 | R | E | BOS873 | 3 | | | 244 | 0 | 0 |
| 1 | 0 4 | Torpedo Ray | | 1 | 2 | 001 | 01 | 28 | R | A | | 2 | 82 | 46 | | 1 | 0 |
| 1 | 0 5 | Porbeagle Shark | | 2 | 2 | 100 | 08 | 80 | R | E | | 2 | 114 | | | 2 | 0 |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | |

COMMENTS

01 Swordfish was slightly damaged by sharks. Collected anal spines and gonads.

02 Took vertebrae sample and gonads from blue shark. I removed a yellow plastic tag from the base of the dorsal fin.

#03 Atlantic Sturgeon was tagged along the dorsal midline; blue tag from Fish and Wildlife, PO Box 23, Sudbury MA 01651; left on. Released in good condition.

#05 Could only get one measurement from porbeagle shark - not enough time to fully sample.

STATUS CODES:

0 = Unknown
1 = Alive
2 = Dead
3 = Dead, Damaged
4 = Dead, Head Only

PROCESSING CODES:

00 = Unknown
01 = No Processing
02 = Chunked
03 = Filleted
04 = Dressed (Gutted Only)
05 = Dressed (Finned Only)
06 = Dressed (Headed and Gutted)
07 = Dressed (Headed, Gutted, Finned)
08 = Dressed (Headed, Gutted, Tailed)
09 = Dressed (Headed, Gutted, Finned, Tailed)
99 = Other

WEIGHT MARKET CODES:

D = Dressed (1)
R = Round (2)

WEIGHT TYPE CODES:

A = Actual (1)
E = Estimated (2)

TAG CODES:

0 = Unknown
1 = Tag Applied by Observer
2 = No Tag(s)
3 = Tag Already Present, Left On
4 = Tag Already Present, Removed
5 = Carcass Tagged (Fish Only)

STANDARD LENGTHS:

| | # 1 | # 2 |
|---------------|------|------|
| Swordfish (c) | LJFL | CK |
| Billfish (c) | LJFL | PFL |
| Tuna | FL | PFL |
| Shark | FL | TL |
| Sturgeon | FL | None |
| Ray | TL | DW |
| Terrapin | TL | NL |
| Other | FL | None |

**NMFS FISHERIES OBSERVER PROGRAM
INDIVIDUAL ANIMAL LOG**

| | |
|-----------------|----|
| OBS/TRIP ID | |
| DATE LAND mm/yy | / |
| PAGE# | OF |
| HAUL # | |

| GEAR # | SEQ # | SPECIES | | INITIAL STATUS CODE | END STATUS CODE | FISH DISP CODE In Appen | PROC CODE | WEIGHT | | | TAG | | LENGTHS cm | | | SEX 0 = U 1 = M 2 = F | BIO-SAMP 0 = N 1 = Y |
|--------|-------|---------|-----------------|---------------------|-----------------|----------------------------|-----------|--------|---------|----------|-----------|---------|------------|----|---------|--------------------------------|----------------------------|
| | | NAME | CODE (blank) | | | | | POUNDS | MKT D/R | TYPE A/E | NUMBER(S) | CODE(S) | #1 | #2 | Est(#1) | | |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | |

COMMENTS

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--|--|--|-----|-----|---------------|------|----|--------------|------|-----|------|----|-----|-------|----|----|----------|----|------|-----|----|----|----------|----|----|-------|----|------|
| STATUS CODES: 0 = Unknown 1 = Alive 2 = Dead 3 = Dead, Damaged 4 = Dead, Head Only | PROCESSING CODES: 00 = Unknown 01 = No Processing 02 = Chunked 03 = Filleted 04 = Dressed (Gutted Only) 05 = Dressed (Finned Only) 06 = Dressed (Headed and Gutted) 07 = Dressed (Headed, Gutted, Finned) 08 = Dressed (Headed, Gutted, Tailed) 09 = Dressed (Headed, Gutted, Finned, Tailed) 99 = Other | WEIGHT MARKET CODES: D = Dressed (1) R = Round (2) WEIGHT TYPE CODES: A = Actual (1) E = Estimated (2) | TAG CODES: 0 = Unknown 1 = Tag Applied by Observer 2 = No Tag(s) 3 = Tag Already Present, Left On 4 = Tag Already Present, Removed 5 = Carcass Tagged (Fish Only) | STANDARD LENGTHS: <table><tr><td></td><td># 1</td><td># 2</td></tr><tr><td>Swordfish (c)</td><td>LJFL</td><td>CK</td></tr><tr><td>Billfish (c)</td><td>LJFL</td><td>PFL</td></tr><tr><td>Tuna</td><td>FL</td><td>PFL</td></tr><tr><td>Shark</td><td>FL</td><td>TL</td></tr><tr><td>Sturgeon</td><td>FL</td><td>None</td></tr><tr><td>Ray</td><td>TL</td><td>DW</td></tr><tr><td>Terrapin</td><td>TL</td><td>NL</td></tr><tr><td>Other</td><td>FL</td><td>None</td></tr></table> | | # 1 | # 2 | Swordfish (c) | LJFL | CK | Billfish (c) | LJFL | PFL | Tuna | FL | PFL | Shark | FL | TL | Sturgeon | FL | None | Ray | TL | DW | Terrapin | TL | NL | Other | FL | None |
| | # 1 | # 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Swordfish (c) | LJFL | CK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Billfish (c) | LJFL | PFL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tuna | FL | PFL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shark | FL | TL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sturgeon | FL | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ray | TL | DW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Terrapin | TL | NL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | FL | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LENGTH FREQUENCY LOG

Length frequencies involve area-specific collection of lengths for a particular species. They are used in determining the composition of the catch for calculating length-weight relationships. When combined with the collection of age structures, they also aid in the determination of the age composition of the catch.

Complete this log on a per haul basis for the biological sampling of specified finfish, squid, and sea scallops (see notes below). Length frequencies and shell height frequencies should be collected in the priority order listed in Tables 1a-f Length Frequency and Age Structure Sampling Priorities in the NEFSC Observer Program Biological Sampling Manual.

Lengths and heights, and any corresponding age structures must be collected from the same trip, haul, dredge (for scallop trips), and fish disposition. Sometimes, samples must also be separated by sex. While one log may be used for multiple species, if fish dispositions or sexes sampled from one haul differ, then separate columns on the log must be used for each of these catch segments. Samples from mixed segments of the catch are not usable.

NOTES: Sea scallop heights are recorded in the right-hand section of this log, marked "Sea Scallops".

Pelagic species sampling is recorded on the Individual Animal Log, unless otherwise instructed.

Crustacean sampling (i.e. lobster and crab sampling) is recorded on the Crustacean Sample Log.

Marine mammal and sea turtle sampling is recorded on the Marine Mammal Biological Sample Log or the Sea Turtle Biological Sample Log, respectively.

INSTRUCTIONS

For instructions on completing the Header fields A, B, C and E, refer to the Common Haul Log Data section of the manual.

1. DREDGE POSITION: (for scallop trips only)

Record the position of the dredge (port, starboard, both) in which the *animals* being sampled were caught

by placing an 'x' next to the appropriate position.

NOTE: Sea scallops sampled must only be from one dredge, not both. However, fish sampled on a scallop trip can be from mixed dredges.

NOTE: If there is length data for catch from different dredge positions, fill out a separate log for each position.

NOTE: For scallops fill out a separate log for each fish disposition code.

For example: During a haul, if you were to sample cod from both the port and starboard dredges and scallops from the port dredge only, the length data would need to be filled out on 2 separate Length Frequency Logs with an 'x' placed next to the appropriate dredge position.

2. SPECIES NAME: Record the complete common name of the animals being sampled, as listed in Appendix A. Species Names. This name must agree with the species name recorded on the corresponding Haul Log.

NOTE: If this species requires multiple columns for length measurements, be sure to rewrite the same species name in each column needed, and carry the rest of the column header information over to the other column(s) with arrows.

Example:

| SPECIES NAME | ATL.COD | ATL.COD |
|-----------------------|-------------|---------|
| SPECIES CODE | | |
| FISH DISPOSITION CODE | 100 — — — → | |
| SEX CODE | 0 — — — → | |
| SAMPLE WEIGHT (R/A) | 450 — — — → | |
| SAMPLE TYPE CODE | 2 — — — → | |
| # SAMPLES | 20 — — — → | |

3. SPECIES CODE: Leave this field blank.

4. FISH DISPOSITION CODE: Indicate the disposition of each species listed in SPECIES NAME (#2) by recording the most appropriate three digit code listed

in Appendix B. Fish Disposition Codes. The code must agree with the code recorded for this species on the corresponding Haul Log.

5. SEX CODE: Indicate the sex of the animals being sampled by recording the appropriate one digit code:

- 0 = Unknown.
- 1 = Male.
- 2 = Female.

NOTE: It may be necessary to sample a species by sex. See Table 2. Groundfish and Shellfish Sampling Requirements by Species for all Domestic Fisheries in the NEFSC Observer Program Biological Sampling Manual. For samples which are sexed, each sex must be recorded in a separate column.

6. SAMPLE WEIGHT: Record, in whole pounds (or to the nearest tenth of a pound, if necessary), the **round actual** weight of all of the animals measured for the species being sampled.

NOTE: On foreign vessels, record weights in whole kilograms (kgs).

NOTE: If a sample from the same catch disposition is sampled by sex, be sure to record the appropriate sample weight for each sex.

7. SAMPLE TYPE CODE: Indicate the type of age structure collected from this sample of measured animals by recording the appropriate one digit code:

- 0 = None.
- 1 = Scales.
- 2 = Otoliths.
- 3 = Shells (no longer collected in the scallop fishery).
- 4 = Whole.
- 5 = Vertebra.
- 6 = Dorsal Spines.
- 7 = Scales and Otoliths (for each animal).
- 8 = Head.
- 9 = Other, record the age structure in COMMENTS.

NOTE: See Table 2. Groundfish and Shellfish Sampling Requirements by Species for all Domestic Fisheries in the NEFSC Observer Program Biological Sampling Manual for the proper age

structure to collect for each species.

8. NUMBER OF SAMPLES: Record the total number of animals from which age structure samples were collected from this sample of measured animals.

Example: One pair of otoliths or one envelope of scales is one age structure sample.

9. LENGTHS: Precede the 0's (zero's) in each interval with the appropriate digit(s) to indicate the centimeter or millimeter range being used for this sample.

NOTE: Finfish and squid are measured in whole **centimeters**. Shellfish (if sampled on this log) are measured in whole **millimeters**.

10. NUMBERS-AT-LENGTH: Record the **total** number of animals measured at each centimeter or millimeter. Do not stroke tally in this field.

Example:

| SPECIES NAME | REDFISH | | | | REDFISH | | | |
|-----------------------|---------|---|---|--|---------|---|---|--|
| SPECIES CODE | | | | | | | | |
| FISH DISPOSITION CODE | 001 | | | | 001 | | | |
| SEX CODE | 2 | | | | 1 | | | |
| SAMPLE WEIGHT (R/A) | 100 | | | | 85 | | | |
| SAMPLE TYPE CODE | 2 | | | | 2 | | | |
| # SAMPLES | 10 | | | | 10 | | | |
| MEASUREMENTS: | 20 | | 0 | | 20 | 1 | 0 | |
| FINFISH, SQUID - cm | 1 | | 1 | | 1 | | 1 | |
| SHELLFISH - mm | 2 | | 2 | | 2 | 3 | 2 | |
| SEX CODES: | 3 | 1 | 3 | | 3 | | 3 | |
| 0 = UNKNOWN | 4 | 2 | 4 | | 4 | | 4 | |

SEA SCALLOP SAMPLING

11. VOLUMETRIC MEASURE OF SCALLOP MEATS: After the **first haul of each observed watch**, record the volumetric measure of the scallop meats, to the nearest 50 milliliters, of all of the animals measured from this random sample of at least 100 kept scallops. See the Scallop Fishery Sampling Priorities in the NEFSC Observer Program Biological Sampling

for further instructions on how to collect this measurement.

12. NUMBERS-AT-HEIGHT: Record the **total** number of sea scallops measured at each height interval. Do not stroke tally in this field.

COMMENTS

Record information regarding fish or scallops sampled on this haul. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

NOTE: If a complete sample can not be obtained, record the reason(s) in this section.

**NMFS FISHERIES OBSERVER PROGRAM
LENGTH FREQUENCY LOG**

| | | | |
|-----------------|----------|-----------------|------------------------------------|
| OBS/TRIP ID | | A | |
| DATE LAND mm/yy | | B / | |
| PAGE # | | C OF | |
| HAUL # | E | DREDGE POSITION | port starboard 1 both |

| | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|----------|-----------|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|-----------------------------|-----------|---------|--|
| SPECIES NAME | 2 | | | | | | | | | | | | | | | | | | SEA SCALLOPS | | | |
| SPECIES CODE | 3 | | | | | | | | | | | | | | | | | | 8009 | | | |
| FISH DISPOSITION CODE | 4 | | | | | | | | | | | | | | | | | | | | | |
| SEX CODE | 5 | | | | | | | | | | | | | | | | | | | | | |
| SAMPLE WEIGHT (R/A) | 6 | | | | | | | | | | | | | | | | | | | | | |
| SAMPLE TYPE CODE | 7 | | | | | | | | | | | | | | | | | | VOLUMETRIC MEASURE OF MEATS | | | |
| # SAMPLES | 8 | | | | | | | | | | | | | | | | | | 11 nearest 50 ml | | | |
| MEASUREMENTS: | 9 | 10 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 10 - 14 | 12 | 110-114 | |
| Finfish, Squid - cm | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 15 - 19 | | 115-119 | |
| Shellfish - mm | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 20 - 24 | | 120-124 | |
| SEX CODES: | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 25 - 29 | | 125-129 | |
| 0 = Unknown | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 30 - 34 | | 130-134 | |
| 1 = Male | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 35 - 39 | | 135-139 | |
| 2 = Female | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 40 - 44 | | 140-144 | |
| SAMPLE TYPE CODES: | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 45 - 49 | | 145-149 | |
| 0 = None | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 50 - 54 | | 150-154 | |
| 1 = Scales | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 55 - 59 | | 155-159 | |
| 2 = Otoliths | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 60 - 64 | | 160-164 | |
| 3 = Shells | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 65 - 69 | | 165-169 | |
| 4 = Whole | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 70 - 74 | | 170-174 | |
| 5 = Vertebra | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 75 - 79 | | 175-179 | |
| 6 = Dorsal Spines | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 80 - 84 | | 180-184 | |
| 7 = Scales & Otoliths | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 85 - 89 | | 185-189 | |
| 8 = Head | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 90 - 94 | | 190-194 | |
| 9 = Other | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 95 - 99 | | 195-199 | |
| | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 100-104 | | 200-204 | |
| | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 105-109 | | 205-209 | |
| COMMENTS | | | | | | | | | | | | | | | | | | | | | | |

NMFS FISHERIES OBSERVER PROGRAM
LENGTH FREQUENCY LOG

| | | | |
|-----------------|----------|-----------------|---|
| OBS/TRIP ID | | A74010L | |
| DATE LAND mm/yy | | 01 | 01 |
| PAGE # | | 3 | OF 3 |
| HAUL # | 5 | DREDGE POSITION | port _____ starboard _____ both _____ |

| SPECIES NAME | Atlantic Cod | | | | Haddock | | | | Spiny Dogfish | | | | Spiny Dogfish | | | | Spiny Dogfish | | | | SEA SCALLOPS | | | | | | | |
|--|--------------|----------|-----------|----------|------------|----------|---|---|---------------|----------|-----------|----------|---------------|----------|---|---|---------------|----------|---|---|-----------------------------|--|--|--|---------|--|---------|--|
| SPECIES CODE | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FISH DISPOSITION CODE | 100 | | | | 100 | | | | 100 | | | | | | | | 100 | | | | 8009 | | | | | | | |
| SEX CODE | 0 | | | | 0 | | | | 2 | | | | | | | | 1 | | | | | | | | | | | |
| SAMPLE WEIGHT (R/A) | 61 | | | | 25 | | | | 503 | | | | | | | | 30 | | | | | | | | | | | |
| SAMPLE TYPE CODE | 2 | | | | 2 | | | | 0 | | | | | | | | 0 | | | | VOLUMETRIC MEASURE OF MEATS | | | | | | | |
| # SAMPLES | 6 | | | | 5 | | | | - | | | | | | | | - | | | | _____ nearest 50 ml | | | | | | | |
| MEASUREMENTS: | 60 | | 80 | | 60 | 1 | | 0 | 60 | | 80 | 2 | 100 | 1 | | 0 | 70 | | | 0 | | | | | 10 - 14 | | 110-114 | |
| Finfish, Squid - cm | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | | | | | | 15 - 19 | | 115-119 | |
| Shellfish - mm | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | 4 | 2 | | 2 | | 2 | 2 | 2 | | | | | | 20 - 24 | | 120-124 | |
| SEX CODES: | 3 | | 3 | 1 | 3 | 1 | 3 | | 3 | | 3 | 9 | 3 | | 3 | | 3 | 3 | 3 | | | | | | 25 - 29 | | 125-129 | |
| 0 = Unknown | 4 | | 4 | | 4 | 2 | 4 | | 4 | | 4 | 9 | 4 | | 4 | | 4 | 1 | 4 | | | | | | 30 - 34 | | 130-134 | |
| 1 = Male | 5 | | 5 | | 5 | 1 | 5 | | 5 | | 5 | 4 | 5 | | 5 | | 5 | | 5 | | | | | | 35 - 39 | | 135-139 | |
| 2 = Female | 6 | 3 | 6 | | 6 | | 6 | | 6 | | 6 | 7 | 6 | | 6 | | 6 | | 6 | | | | | | 40 - 44 | | 140-144 | |
| SAMPLE TYPE CODES: | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | 8 | 7 | | 7 | | 7 | | 7 | | | | | | 45 - 49 | | 145-149 | |
| 0 = None | 8 | 2 | 8 | | 8 | | 8 | | 8 | 1 | 8 | 6 | 8 | | 8 | | 8 | | 8 | | | | | | 50 - 54 | | 150-154 | |
| 1 = Scales | 9 | | 9 | | 9 | | 9 | | 9 | 1 | 9 | 6 | 9 | | 9 | | 9 | | 9 | | | | | | 55 - 59 | | 155-159 | |
| 2 = Otoliths | 70 | 1 | 0 | | 0 | | 0 | | 70 | 2 | 90 | 5 | 0 | | 0 | | 0 | | 0 | | | | | | 60 - 64 | | 160-164 | |
| 3 = Shells | 1 | 1 | 1 | | 1 | | 1 | | 1 | 1 | 1 | 4 | 1 | | 1 | | 1 | | 1 | | | | | | 65 - 69 | | 165-169 | |
| 4 = Whole | 2 | 1 | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | | | | | 70 - 74 | | 170-174 | |
| 5 = Vertebra | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | | | | | 75 - 79 | | 175-179 | |
| 6 = Dorsal Spines | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | 1 | 4 | | 4 | | 4 | | 4 | | | | | | 80 - 84 | | 180-184 | |
| 7 = Scales & Otoliths | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | 1 | 5 | | 5 | | 5 | | 5 | | | | | | 85 - 89 | | 185-189 | |
| 8 = Head | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | | | | | 90 - 94 | | 190-194 | |
| 9 = Other | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | 3 | 7 | | 7 | | 7 | | 7 | | | | | | 95 - 99 | | 195-199 | |
| | 8 | | 8 | | 8 | | 8 | | 8 | 3 | 8 | | 8 | | 8 | | 8 | | 8 | | | | | | 100-104 | | 200-204 | |
| | 9 | | 9 | | 9 | | 9 | | 9 | 2 | 9 | | 9 | | 9 | | 9 | | 9 | | | | | | 105-109 | | 205-209 | |
| COMMENTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All kept catch from the last haul weighed (actual, round) and measured. Did not have time to get otoliths from all cod. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**NMFS FISHERIES OBSERVER PROGRAM
LENGTH FREQUENCY LOG**

| | | | |
|-----------------|--|-----------------|---|
| OBS/TRIP ID | | | |
| DATE LAND mm/yy | | / | |
| PAGE # | | OF | |
| HAUL # | | DREDGE POSITION | port _____ starboard _____ both _____ |

| | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|-----------------------------|--|---------|--|
| SPECIES NAME | | | | | | | | | | | | | | | | | | SEA SCALLOPS | | | |
| SPECIES CODE | | | | | | | | | | | | | | | | | | 8009 | | | |
| FISH DISPOSITION CODE | | | | | | | | | | | | | | | | | | | | | |
| SEX CODE | | | | | | | | | | | | | | | | | | | | | |
| SAMPLE WEIGHT (R/A) | | | | | | | | | | | | | | | | | | | | | |
| SAMPLE TYPE CODE | | | | | | | | | | | | | | | | | | VOLUMETRIC MEASURE OF MEATS | | | |
| # SAMPLES | | | | | | | | | | | | | | | | | | _____ nearest 50 ml | | | |
| MEASUREMENTS: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | 10 - 14 | | 110-114 | |
| Finfish, Squid - cm | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | 15 - 19 | | 115-119 | |
| Shellfish - mm | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | 20 - 24 | | 120-124 | |
| SEX CODES: | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | 25 - 29 | | 125-129 | |
| 0 = Unknown | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | 30 - 34 | | 130-134 | |
| 1 = Male | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | 35 - 39 | | 135-139 | |
| 2 = Female | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | 40 - 44 | | 140-144 | |
| SAMPLE TYPE CODES: | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | 45 - 49 | | 145-149 | |
| 0 = None | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | 50 - 54 | | 150-154 | |
| 1 = Scales | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | 55 - 59 | | 155-159 | |
| 2 = Otoliths | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | 60 - 64 | | 160-164 | |
| 3 = Shells | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | 65 - 69 | | 165-169 | |
| 4 = Whole | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | 70 - 74 | | 170-174 | |
| 5 = Vertebra | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | 75 - 79 | | 175-179 | |
| 6 = Dorsal Spines | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | 80 - 84 | | 180-184 | |
| 7 = Scales & Otoliths | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | 85 - 89 | | 185-189 | |
| 8 = Head | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | | 6 | 90 - 94 | | 190-194 | |
| 9 = Other | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | 95 - 99 | | 195-199 | |
| | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | 100-104 | | 200-204 | |
| | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | | 9 | 105-109 | | 205-209 | |
| COMMENTS | | | | | | | | | | | | | | | | | | | | | |

CRUSTACEAN SAMPLE LOG

This log is designed to collect biological data on the size and condition of individual lobsters and crabs. These data are used to determine crustacean mortality rates, and to assess the effects of fishing on these rates.

Complete this log on a per haul basis during deployments targeting lobsters and crabs. It should also be completed to sample lobsters and crabs caught on other deployments, as the biological sampling priorities specify, and as time permits. **Only one species may be recorded on a log**, as the information collected for lobsters and crabs differs.

When sampling lobsters, every lobster caught in a haul should be examined, and recorded as one record. If it is not possible to sample every lobster, the observer should attempt to count all of the lobsters caught, and sample as many as possible. When possible, the observer should attempt to sample all of the crabs in the priority order listed in Tables 1a-h. Length Frequency and Age Structure Sampling Priorities in the NEFSC Observer Program Biological Sampling Manual.

If the observer is unable to collect all of the information for every animal sampled, the priority of data collection should be the order (left to right) of the fields listed on the log. All animals sampled must have a CARAPACE LENGTH or CARAPACE WIDTH and CATCH DISPOSITION recorded.

When more than 50 animals are sampled, continue sampling on the back of the log, and number each page accordingly.

INSTRUCTIONS

For instructions on completing fields **A**, **B**, **C**, **E**, **Q** and **R**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

1. NUMBER OF ANIMALS CAUGHT: Record the total number of animals (of the species being sampled on this log) caught in this haul. This number may differ from the number of animals sampled if a shortage of time, or other circumstances, do not permit sampling every animal.

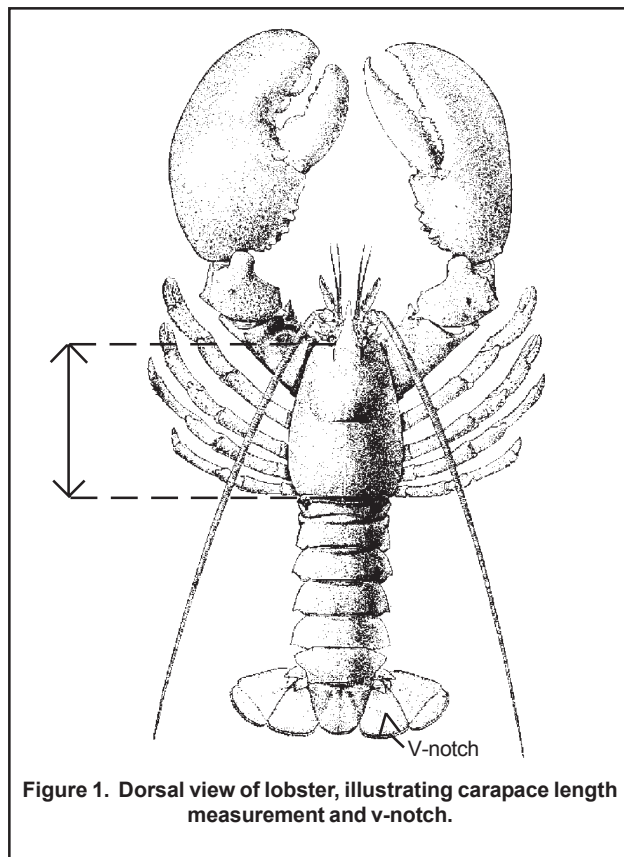
2. COUNT - ACTUAL OR ESTIMATED (A/E): Indicate whether the number recorded in NUMBER OF ANIMALS CAUGHT (#1) is an actual or estimated count by recording the appropriate letter code:

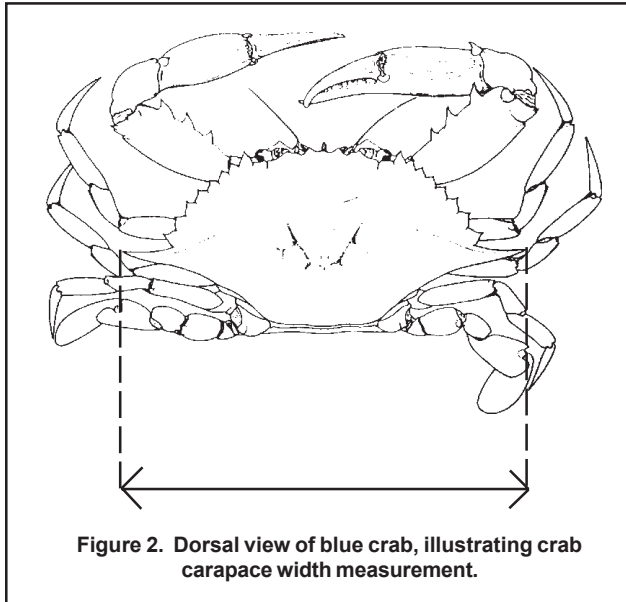
A = Actual.

E = Estimated.

3. SHELL DISEASE PERCENTAGE: Record the percentage of animals, of the species being sampled, caught in the haul that have signs of shell disease. Look for dark necrotic spots on the carapace. A characteristic necrosis forms around the eye sockets, creating "spectacles".

4. CARAPACE LENGTH/WIDTH: Record, in whole millimeters, the carapace **length** (for lobsters; see Figure 1) or **width** (for crabs; see Figure 2) of the animal being sampled. Use calipers for these measurements. See Appendix P. Vernier Caliper Instructions for





further information.

5. CATCH DISPOSITION: Indicate the disposition of the animal being sampled by recording the appropriate alpha abbreviation:

- K = Kept.
- D = Discarded.

NOTE: This disposition must agree with the disposition recorded for this animal on the corresponding Haul Log.

6. SEX: Indicate the sex of the animal being sampled by recording the appropriate one digit code. See the Sex Determination section of the NEFSC Observer Program Training Manual for instructions on determining the sex of lobsters and crabs.

- 0 = Unknown.
- 1 = Male.
- 2 = Female.

7. EGG: Indicate whether eggs are visible underneath the back part of the abdomen of the animal being sampled by recording the appropriate one digit code:

- 0 = Unknown.
- 1 = No. (**Used for all males.**)
- 2 = Yes.

NOTE: Egg color is light green to black (**for lobsters**) or orange to black (**for crabs**).

*****For LOBSTERS only*****

Leave these fields blank when sampling crabs.

8. V-NOTCH: Indicate whether a v-notch exists on the lobster being sampled by recording the appropriate one digit code:

- 0 = Unknown.
- 1 = No.
- 2 = Yes, old. (Uneven edges, possible infected area.)
- 3 = Yes, new. (Clean edges with distinctive V shape.)

NOTE: A v-notch is a triangular, 1/8" - 1/4" deep cut in the tail of a lobster. It is usually on the lobster's right-hand side, and may last for 2-3 molts. See Figure 1.

9. MOLT: Indicate the condition of the shell of the lobster being sampled by recording the appropriate one digit code:

- 0 = Unknown.
- 1 = Soft. (Barely a shell, very fragile.)
- 2 = Paper. (Crinkles under lateral pressure.)
- 3 = Hard. (Withstands lateral pressure.)
- 4 = Splitter. (Stage just before molt. Shell is hard and split.) - splits down length of carapace.

10. # OF CLAWS: Record the number of claws (0, 1, or 2) on the lobster being sampled. To be counted, claws should have a shell, regardless of size or shell condition. Do not count regenerating claws which are small, fleshy appendages with no shell.

COMMENTS

Record information regarding this sample or your sampling methods (*i.e.* the reason all animals caught were not sampled) below. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name or animal number.

**NMFS FISHERIES OBSERVER PROGRAM
CRUSTACEAN SAMPLE LOG (Front)**

| | |
|-----------------|-------------|
| OBS/TRIP ID | A |
| DATE LAND mm/yy | B / |
| PAGE # | C OF |
| HAUL # | E |

| SPECIES | | | | | | | | ANIMALS CAUGHT | | | | | | | | SHELL DISEASE | | | | | |
|------------------|---|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|------------------|--|--------------------------------|-------------|--------------|-------------------|------------------|-----------------------|--|--|--|--|----------|--|
| NAME | | | | CODE | | | | NUMBER | | | | A / E | | | | PERCENTAGE | | | | | |
| Q | | | | | | | | R | | | | 1 | | | | 2 | | | | 3 | |
| | | | | | | | | LOBSTER ONLY | | | | LOBSTER ONLY | | | | | | | | | |
| CARAPACE (mm) | | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | CARAPACE (mm) | | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | | | | | | |
| LENGTH - LOBSTER | | | | | | | | LENGTH - LOBSTER | | | | | | | | | | | | | |
| WIDTH - CRAB | | | | | | | | WIDTH - CRAB | | | | | | | | | | | | | |
| 1 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 26 | | | | | | | | | | | | | |
| 2 | | | | | | | | 27 | | | | | | | | | | | | | |
| 3 | | | | | | | | 28 | | | | | | | | | | | | | |
| 4 | | | | | | | | 29 | | | | | | | | | | | | | |
| 5 | | | | | | | | 30 | | | | | | | | | | | | | |
| 6 | | | | | | | | 31 | | | | | | | | SEX CODES: 0 = Unknown 1 = Male 2 = Female | | | | | |
| 7 | | | | | | | | 32 | | | | | | | | | | | | | |
| 8 | | | | | | | | 33 | | | | | | | | | | | | | |
| 9 | | | | | | | | 34 | | | | | | | | EGG CODES: 0 = Unknown 1 = No 2 = Yes | | | | | |
| 10 | | | | | | | | 35 | | | | | | | | | | | | | |
| 11 | | | | | | | | 36 | | | | | | | | | | | | | |
| 12 | | | | | | | | 37 | | | | | | | | V-NOTCH CODES: 0 = Unknown 1 = No 2 = Yes, Old 3 = Yes, New | | | | | |
| 13 | | | | | | | | 38 | | | | | | | | | | | | | |
| 14 | | | | | | | | 39 | | | | | | | | | | | | | |
| 15 | | | | | | | | 40 | | | | | | | | MOLT CODES: 0 = Unknown 1 = Soft 2 = Paper 3 = Hard 4 = Splitter | | | | | |
| 16 | | | | | | | | 41 | | | | | | | | | | | | | |
| 17 | | | | | | | | 42 | | | | | | | | | | | | | |
| 18 | | | | | | | | 43 | | | | | | | | | | | | | |
| 19 | | | | | | | | 44 | | | | | | | | | | | | | |
| 20 | | | | | | | | 45 | | | | | | | | | | | | | |
| 21 | | | | | | | | 46 | | | | | | | | | | | | | |
| 22 | | | | | | | | 47 | | | | | | | | | | | | | |
| 23 | | | | | | | | 48 | | | | | | | | | | | | | |
| 24 | | | | | | | | 49 | | | | | | | | | | | | | |
| 25 | | | | | | | | 50 | | | | | | | | | | | | | |
| COMMENTS | | | | | | | | | | | | | | | | | | | | | |

**NMFS FISHERIES OBSERVER PROGRAM
CRUSTACEAN SAMPLE LOG (Back)**

| | |
|-----------------|-------------|
| OBS/TRIP ID | A |
| DATE LAND mm/yy | B / |
| PAGE # | C OF |
| HAUL # | E |

| LOBSTER ONLY | | | | | | | | LOBSTER ONLY | | | | | | | | |
|---------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|---------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|--|--|--|
| CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | | | |
| 51 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 76 | | | | | | | | |
| 52 | | | | | | | | 77 | | | | | | | | |
| 53 | | | | | | | | 78 | | | | | | | | |
| 54 | | | | | | | | 79 | | | | | | | | |
| 55 | | | | | | | | 80 | | | | | | | | |
| 56 | | | | | | | | 81 | | | | | | | | |
| 57 | | | | | | | | 82 | | | | | | | | |
| 58 | | | | | | | | 83 | | | | | | | | |
| 59 | | | | | | | | 84 | | | | | | | | |
| 60 | | | | | | | | 85 | | | | | | | | |
| 61 | | | | | | | | 86 | | | | | | | | |
| 62 | | | | | | | | 87 | | | | | | | | |
| 63 | | | | | | | | 88 | | | | | | | | |
| 64 | | | | | | | | 89 | | | | | | | | |
| 65 | | | | | | | | 90 | | | | | | | | |
| 66 | | | | | | | | 91 | | | | | | | | |
| 67 | | | | | | | | 92 | | | | | | | | |
| 68 | | | | | | | | 93 | | | | | | | | |
| 69 | | | | | | | | 94 | | | | | | | | |
| 70 | | | | | | | | 95 | | | | | | | | |
| 71 | | | | | | | | 96 | | | | | | | | |
| 72 | | | | | | | | 97 | | | | | | | | |
| 73 | | | | | | | | 98 | | | | | | | | |
| 74 | | | | | | | | 99 | | | | | | | | |
| 75 | | | | | | | | 100 | | | | | | | | |

SEX CODES:

0 = Unknown

1 = Male

2 = Female

EGG CODES:

0 = Unknown

1 = No

2 = Yes

V-NOTCH CODES:

0 = Unknown

1 = No

2 = Yes, Old

3 = Yes, New

MOLT CODES:

0 = Unknown

1 = Soft

2 = Paper

3 = Hard

4 = Splitter

COMMENTS

**NMFS FISHERIES OBSERVER PROGRAM
CRUSTACEAN SAMPLE LOG (Front)**

| | |
|-----------------|---------|
| OBS/TRIP ID | B72036- |
| DATE LAND mm/yy | 01 / 01 |
| PAGE # | 4 OF 4 |
| HAUL # | 44 |

| SPECIES | | | | | | | ANIMALS CAUGHT | | | | | | | SHELL DISEASE | |
|---|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|------------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|---------------|---|
| NAME | | | | CODE | | | NUMBER | | | | A / E | | | PERCENTAGE | |
| American Lobster | | | | | | | 33 | | | | A | | | 10 | |
| LOBSTER ONLY | | | | | | | LOBSTER ONLY | | | | | | | | |
| CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | | |
| LENGTH - LOBSTER | | | | | | | LENGTH - LOBSTER | | | | | | | | |
| WIDTH - CRAB | | | | | | | WIDTH - CRAB | | | | | | | | |
| 1 | 117 | D | 2 | 2 | 1 | 3 | 2 | 26 | 120 | D | 2 | 2 | 1 | 3 | 2 |
| 2 | 90 | K | 2 | 1 | 1 | 3 | 2 | 27 | 103 | K | 2 | 1 | 1 | 3 | 2 |
| 3 | 93 | K | 1 | 1 | 1 | 3 | 2 | 28 | 91 | K | 2 | 1 | 1 | 3 | 2 |
| 4 | 133 | K | 1 | 1 | 1 | 3 | 2 | 29 | 106 | K | 2 | 1 | 1 | 3 | 2 |
| 5 | 124 | D | 2 | 2 | 1 | 3 | 2 | 30 | 102 | K | 1 | 1 | 1 | 3 | 0 |
| 6 | 130 | K | 1 | 1 | 1 | 3 | 2 | 31 | 118 | D | 2 | 2 | 1 | 3 | 2 |
| 7 | 131 | D | 2 | 2 | 1 | 3 | 2 | 32 | 117 | D | 2 | 2 | 1 | 3 | 2 |
| 8 | 122 | K | 1 | 1 | 1 | 3 | 2 | 33 | 132 | D | 2 | 2 | 1 | 3 | 2 |
| 9 | 118 | K | 2 | 1 | 1 | 3 | 2 | 34 | | | | | | | |
| 10 | 100 | K | 1 | 1 | 1 | 3 | 2 | 35 | | | | | | | |
| 11 | 132 | K | 2 | 1 | 1 | 3 | 2 | 36 | | | | | | | |
| 12 | 148 | K | 2 | 1 | 1 | 3 | 2 | 37 | | | | | | | |
| 13 | 134 | K | 1 | 1 | 1 | 3 | 2 | 38 | | | | | | | |
| 14 | 101 | D | 2 | 2 | 1 | 3 | 2 | 39 | | | | | | | |
| 15 | 102 | K | 2 | 1 | 1 | 3 | 2 | 40 | | | | | | | |
| 16 | 116 | K | 2 | 1 | 1 | 3 | 2 | 41 | | | | | | | |
| 17 | 108 | K | 2 | 1 | 1 | 3 | 2 | 42 | | | | | | | |
| 18 | 105 | K | 1 | 1 | 1 | 3 | 2 | 43 | | | | | | | |
| 19 | 103 | K | 2 | 1 | 1 | 3 | 2 | 44 | | | | | | | |
| 20 | 123 | K | 2 | 1 | 1 | 3 | 2 | 45 | | | | | | | |
| 21 | 138 | K | 1 | 1 | 1 | 3 | 2 | 46 | | | | | | | |
| 22 | 99 | K | 1 | 1 | 1 | 3 | 2 | 47 | | | | | | | |
| 23 | 116 | K | 1 | 1 | 1 | 3 | 1 | 48 | | | | | | | |
| 24 | 107 | K | 1 | 1 | 1 | 3 | 2 | 49 | | | | | | | |
| 25 | 108 | D | 2 | 2 | 1 | 3 | 2 | 50 | | | | | | | |
| SEX CODES: 0 = Unknown 1 = Male 2 = Female | | | | | | | | | | | | | | | |
| EGG CODES: 0 = Unknown 1 = No 2 = Yes | | | | | | | | | | | | | | | |
| V-NOTCH CODES: 0 = Unknown 1 = No 2 = Yes, Old 3 = Yes, New | | | | | | | | | | | | | | | |
| MOLT CODES: 0 = Unknown 1 = Soft 2 = Paper 3 = Hard 4 = Splitter | | | | | | | | | | | | | | | |
| COMMENTS About 10% of the lobster had a brown, spotting shell disease. Females w/eggs were discarded. | | | | | | | | | | | | | | | |

**NMFS FISHERIES OBSERVER PROGRAM
CRUSTACEAN SAMPLE LOG (Back)**

| | |
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| OBS/TRIP ID | |
| DATE LAND mm/yy | / |
| PAGE # | OF |
| HAUL # | |

| LOBSTER ONLY | | | | | | | LOBSTER ONLY | | | | | | |
|---------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|---------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|
| CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W |
| 51 | | | | | | | 76 | | | | | | |
| 52 | | | | | | | 77 | | | | | | |
| 53 | | | | | | | 78 | | | | | | |
| 54 | | | | | | | 79 | | | | | | |
| 55 | | | | | | | 80 | | | | | | |
| 56 | | | | | | | 81 | | | | | | |
| 57 | | | | | | | 82 | | | | | | |
| 58 | | | | | | | 83 | | | | | | |
| 59 | | | | | | | 84 | | | | | | |
| 60 | | | | | | | 85 | | | | | | |
| 61 | | | | | | | 86 | | | | | | |
| 62 | | | | | | | 87 | | | | | | |
| 63 | | | | | | | 88 | | | | | | |
| 64 | | | | | | | 89 | | | | | | |
| 65 | | | | | | | 90 | | | | | | |
| 66 | | | | | | | 91 | | | | | | |
| 67 | | | | | | | 92 | | | | | | |
| 68 | | | | | | | 93 | | | | | | |
| 69 | | | | | | | 94 | | | | | | |
| 70 | | | | | | | 95 | | | | | | |
| 71 | | | | | | | 96 | | | | | | |
| 72 | | | | | | | 97 | | | | | | |
| 73 | | | | | | | 98 | | | | | | |
| 74 | | | | | | | 99 | | | | | | |
| 75 | | | | | | | 100 | | | | | | |

SEX CODES:

0 = Unknown

1 = Male

2 = Female

EGG CODES:

0 = Unknown

1 = No

2 = Yes

V-NOTCH CODES:

0 = Unknown

1 = No

2 = Yes, Old

3 = Yes, New

MOLT CODES:

0 = Unknown

1 = Soft

2 = Paper

3 = Hard

4 = Splitter

COMMENTS

**NMFS FISHERIES OBSERVER PROGRAM
CRUSTACEAN SAMPLE LOG (Front)**

| | |
|-----------------|----|
| OBS/TRIP ID | |
| DATE LAND mm/yy | / |
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| SPECIES | | | | | | | ANIMALS CAUGHT | | | | | | | SHELL DISEASE |
|------------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|------------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|---|
| NAME | | | | CODE | | | NUMBER | | | | A / E | | PERCENTAGE | |
| | | | | | | | | | | | | | | |
| LOBSTER ONLY | | | | | | | LOBSTER ONLY | | | | | | | |
| CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | |
| LENGTH - LOBSTER | | | | | | | LENGTH - LOBSTER | | | | | | | |
| WIDTH - CRAB | | | | | | | WIDTH - CRAB | | | | | | | |
| 1 | | | | | | | 26 | | | | | | | |
| 2 | | | | | | | 27 | | | | | | | |
| 3 | | | | | | | 28 | | | | | | | |
| 4 | | | | | | | 29 | | | | | | | |
| 5 | | | | | | | 30 | | | | | | | |
| 6 | | | | | | | 31 | | | | | | | SEX CODES: 0 = Unknown 1 = Male 2 = Female |
| 7 | | | | | | | 32 | | | | | | | |
| 8 | | | | | | | 33 | | | | | | | |
| 9 | | | | | | | 34 | | | | | | | EGG CODES: 0 = Unknown 1 = No 2 = Yes |
| 10 | | | | | | | 35 | | | | | | | |
| 11 | | | | | | | 36 | | | | | | | |
| 12 | | | | | | | 37 | | | | | | | V-NOTCH CODES: 0 = Unknown 1 = No 2 = Yes, Old 3 = Yes, New |
| 13 | | | | | | | 38 | | | | | | | |
| 14 | | | | | | | 39 | | | | | | | |
| 15 | | | | | | | 40 | | | | | | | MOLT CODES: 0 = Unknown 1 = Soft 2 = Paper 3 = Hard 4 = Splitter |
| 16 | | | | | | | 41 | | | | | | | |
| 17 | | | | | | | 42 | | | | | | | |
| 18 | | | | | | | 43 | | | | | | | |
| 19 | | | | | | | 44 | | | | | | | |
| 20 | | | | | | | 45 | | | | | | | |
| 21 | | | | | | | 46 | | | | | | | |
| 22 | | | | | | | 47 | | | | | | | |
| 23 | | | | | | | 48 | | | | | | | |
| 24 | | | | | | | 49 | | | | | | | |
| 25 | | | | | | | 50 | | | | | | | |
| COMMENTS | | | | | | | | | | | | | | |

**NMFS FISHERIES OBSERVER PROGRAM
CRUSTACEAN SAMPLE LOG (Back)**

| | |
|-----------------|----|
| OBS/TRIP ID | |
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| LOBSTER ONLY | | | | | | | LOBSTER ONLY | | | | | | |
|---------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|---------------|--------------------------------|-------------|-------------|-------------------|------------------|-----------------------|
| CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W | CARAPACE (mm) | C D I S P (K/D) | S E X | E G G | V- N O T | M O L T | # C L A W |
| 51 | | | | | | | 76 | | | | | | |
| 52 | | | | | | | 77 | | | | | | |
| 53 | | | | | | | 78 | | | | | | |
| 54 | | | | | | | 79 | | | | | | |
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| 62 | | | | | | | 87 | | | | | | |
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| 69 | | | | | | | 94 | | | | | | |
| 70 | | | | | | | 95 | | | | | | |
| 71 | | | | | | | 96 | | | | | | |
| 72 | | | | | | | 97 | | | | | | |
| 73 | | | | | | | 98 | | | | | | |
| 74 | | | | | | | 99 | | | | | | |
| 75 | | | | | | | 100 | | | | | | |

SEX CODES:

0 = Unknown

1 = Male

2 = Female

EGG CODES:

0 = Unknown

1 = No

2 = Yes

V-NOTCH CODES:

0 = Unknown

1 = No

2 = Yes, Old

3 = Yes, New

MOLT CODES:

0 = Unknown

1 = Soft

2 = Paper

3 = Hard

4 = Splitter

COMMENTS

MARINE MAMMAL BIOLOGICAL SAMPLE LOG

The purpose of this log is to record sex, body measurements, and biological samples taken from all incidentally taken marine mammals. For more detailed instructions on incidental take sample collection, refer to the Marine Mammal Incidental Take and Biological Sampling Guidelines section of the NEFSC Observer Program Training Manual.

INSTRUCTIONS

For instructions on completing the Header fields **A**, **B** and **C**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

If any of the measurements cannot be collected, record a dash (-) in the field and record the reason why it wasn't obtained in COMMENTS.

1. PSID #: Record the consecutive identification number (Protected Species ID) for each animal that is sampled during this trip. This should be the same number as recorded on the Incidental Take Log.

2. SPECIES NAME: Record the complete common name of each incidentally taken marine mammal biologically sampled on this trip, as listed in Appendix A. Species Names.

NOTE: If it is not possible to make a positive species identification, identify the animal to the most specific generic group of which you are positive, *i.e.* baleen whale, unidentified dolphin, seal *etc.*
DO NOT GUESS AT SPECIES IDENTIFICATION.

3. SEX: Indicate the sex of the marine mammal by placing an "X" next to the appropriate code:

- 0 = Unknown.
- 1 = Male.
- 2 = Female.

4. BODY TEMPERATURE: Record, to the nearest tenth of a degree Fahrenheit, the dorsal musculature temperature. This measurements should be taken for all incidental takes of cetaceans and pinnipeds. It

must be taken as close as possible to the time the animal is brought onboard, and before cutting into the animal occurs. To take a temperature, always insert the probe gently, and keep probe entry sites consistent. See Figure 1, letter H for cetaceans and Figure 2, letter D for pinnipeds.

5. BLUBBER THICKNESS: Record, to the nearest tenth of a centimeter, the thickness of the blubber of the cetacean or pinniped. Measure from where the blubber meets the muscle, up to and including the skin.

CETACEAN: To obtain this measurement, make an incision two to three inches behind the blow hole of the marine mammal. See Figure 1, letter G.

PINNIPED: To obtain this measurement, make an incision in the ventral surface of the marine mammal, about five or six inches anterior to the navel, in the middle of the body. See Figure 2, letter D.

BODY MEASUREMENTS

Six body measurements will be taken and recorded for each cetacean. Three body measurements will be taken and recorded for each pinniped.

When measurements are taken which require a mammal to be placed on one side, the preferred method is for the animal to be lying on the right side, *i.e.* **measurements taken on the left side**. The body measurements are diagramed and specified in Figures 1-3. All length measurements are recorded in whole centimeters.

Do not piece together animal parts that have been removed from the body to obtain these measurements. Rather, record a dash (-) in the field, and explain why the measurement is not taken in COMMENTS.

6. TOTAL LENGTH:

CETACEAN: Record the **straight line** length from the tip of the jaw (top or bottom jaw, whichever is longer) to the fluke notch. See Figure 1, letter A.

PINNIPED: Record the **straight line** measurement from the snout to the tip of the tail. See

Figure 2, letter A.

7. GIRTH:

CETACEAN: Record the girth of the animal just under the pectoral flippers at the axilla. See Figure 1, letter F.

PINNIPED: Record the girth of the animal just under the fore-flippers at the axilla. See Figure 2, letter C.

8. HIND FLIPPER OR PECTORAL FLIPPER LENGTH:

CETACEAN: Record the **straight line** length of one flipper of the cetacean. This length is taken from the outside or anterior edge of the flipper to the tip of the flipper. This is the longest length along the pectoral flipper. See Figure 1, letter B.

PINNIPED: Record the **straight line** length of one **rear** flipper of the pinniped. This length is taken from the outside anterior edge of the flipper at the joint where the flipper connects to the body (this is best located by flexing the flipper forward and measuring from the point where the flipper flexes) to the tip of the flipper. See Figure 2, letter B.

9. PECTORAL FLIPPER WIDTH:

CETACEAN: Using the same flipper on which the length was measured, record the **straight line** width, at its widest part. See Figure 1, letter C.

PINNIPED: No measurement taken; record a dash (-) in this field.

10. DORSAL FIN HEIGHT:

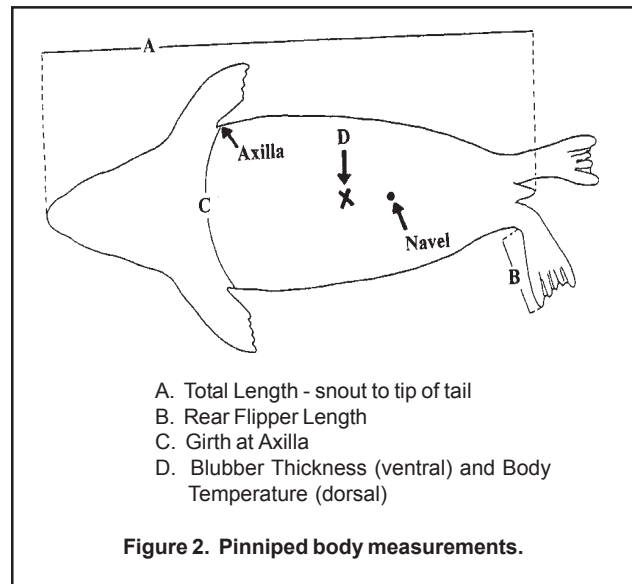
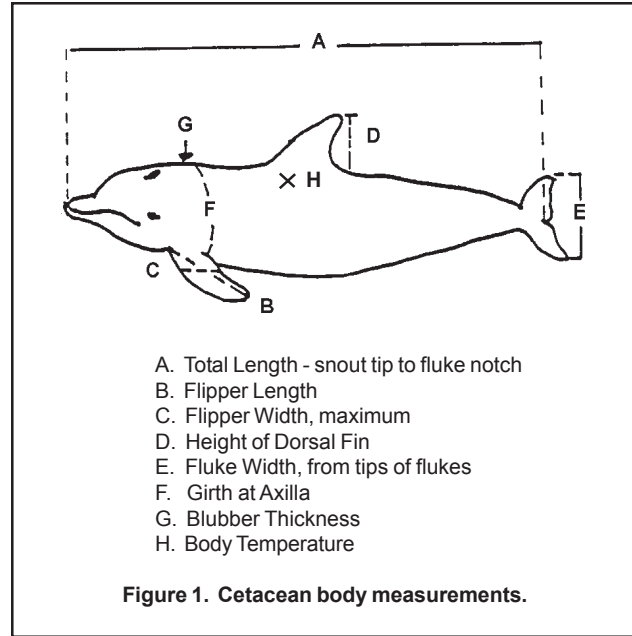
CETACEAN: Record the **straight line** height of the dorsal fin of the cetacean from the posterior tip of the fin to the insertion at the body. See Figure 1, letter D.

PINNIPED: No measurement taken; record a dash (-) in this field.

11. FLUKE WIDTH:

CETACEAN: Record the width of the flukes of the cetacean, from one tip to the other. See Figure 1, letter E.

PINNIPED: No measurements taken; record a dash (-) in this field.



12. WHOLE ANIMAL RETAINED?: Record "1" if the animal is retained by the observer to be brought to shore. Record "0" if the whole animal is not retained.

NOTE: If the marine mammal is retained, record the sex, body temperature and body measurements. Do not collect a blubber thickness (record a dash) or other biological samples (record zero's).

JAW/TISSUE/ORGAN/HEAD SAMPLES

Listed below are the samples that may be considered priorities for certain species. Refer to Table 1. Marine Mammal Biological Sampling Priorities in the NEFSC Observer Program Biological Sampling Manual to find the specific sampling requests for each **cetacean** and **pinniped** species.

It is very important to determine, before you begin cutting a cetacean for jaw/tissue/organ/head samples, if you will be able to take a BODY TEMPERATURE MEASUREMENT (#4). This measurement must be taken as close as possible to the time the animal is brought onboard, and before cutting into the marine mammal occurs.

For the following fields, record the **total number** of samples taken. If a sample is not taken, record a "0" (zero).

13. FIN CLIP/FLIPPER/SKIN: If requested for a particular species, collect a finclip from cetaceans and a flipper from pinnipeds.

14. JAW

15. STOMACH

16. BLUBBER

17. MUSCLE

18. REPRODUCTIVE TRACT

19. HEAD/SKULL

20. OTHER: Record the number of additional samples collected.

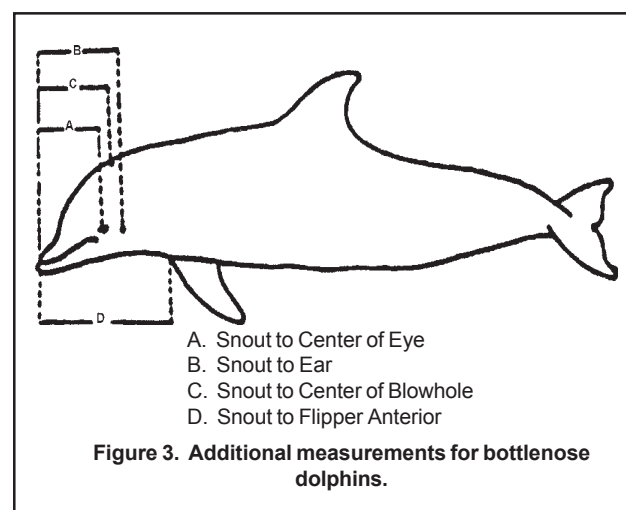
NOTE: If any additional sample(s) is (are) collected from this animal, record which ones in COMMENTS.

ADDITIONAL MEASUREMENTS FOR BOTTLENOSE DOLPHINS

In addition to the body measurements required for all incidentally taken cetaceans, the following four measurements are to be taken for all bottlenose dolphins greater than 2 meters (approximately 7 feet) in

total length: **snout to center of eye**, **snout to ear**, **snout to center of blowhole** and **snout to flipper anterior**. All measurements are **straight**, made parallel to longitudinal body axis. See Figure 3.

Keep in mind that these additional measurements need to be taken before the head is removed. If time constraints necessitate choosing between taking the head or taking these additional measurements; take the head.



COMMENTS

Animal specific:

For **each animal** the observer must sketch and describe identifying characteristics, condition, marks, scars, gear on the animal, injuries, etc. Reference each description with the animal's unique PSID # (#1).

General:

Record any additional information regarding the marine mammal incidental take(s), especially when data are unable to be collected. Reference each comment with its corresponding field name.

NMFS FISHERIES OBSERVER PROGRAM

MARINE MAMMAL BIOLOGICAL SAMPLE LOG (Front)

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| OBS/TRIP ID | A |
| DATE LAND mm/yy | B / |
| PAGE # | C OF |

| PSID # | SPECIES NAME | SEX 0 = U 1 = M 2 = F | MARINE MAMMAL MEASUREMENTS | | | | | CETACEANS ONLY | | | NUMBER OF SAMPLES TAKEN | | | | | | | | |
|---|--------------|--------------------------------|----------------------------|----------------------|---|-------------------|----------------------|-------------------|----------------------|-------------------|-------------------------|------------------------|-----|------|------|------|-------------|-------------|------------------------|
| | | | Body Temp °F | Blubber Thickness cm | Total Length cm | Axillary Girth cm | Hind/Pec Flip Len cm | Pec Flip Width cm | Dorsal Fin Height cm | Fluke Width cm | Whole | Finclip/ Flipper/ Skin | Jaw | Stom | Blub | Musc | Repro Tract | Head/ Skull | Other list in comments |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
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| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | | | | | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | | | | | General comments: | | | | | | | | | |

**NMFS FISHERIES OBSERVER PROGRAM
MARINE MAMMAL BIOLOGICAL SAMPLE LOG (Back)**

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| OBS/TRIP ID | A |
| DATE LAND mm/yy | B / |
| PAGE # | C OF |

| | | | |
|---|---|---|---|
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | General comments: | |
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | | |
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ |
| | | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ |

NMFS FISHERIES OBSERVER PROGRAM

MARINE MAMMAL BIOLOGICAL SAMPLE LOG (Front)

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| OBS/TRIP ID | A81025C | | |
| DATE LAND mm/yy | 01 | / | 01 |
| PAGE # | 1 | OF | 2 |

| PSID # | SPECIES NAME | SEX 0 = U 1 = M 2 = F | MARINE MAMMAL MEASUREMENTS | | | | | CETACEANS ONLY | | | NUMBER OF SAMPLES TAKEN | | | | | | | | |
|--|--------------------|--------------------------------|--|----------------------|-----------------|-------------------|----------------------|---|----------------------|----------------|--|------------------------|-----|------|------|------|-------------|-------------|------------------------|
| | | | Body Temp °F | Blubber Thickness cm | Total Length cm | Axillary Girth cm | Hind/Pec Flip Len cm | Pec Flip Width cm | Dorsal Fin Height cm | Fluke Width cm | Whole | Finclip/ Flipper/ Skin | Jaw | Stom | Blub | Musc | Repro Tract | Head/ Skull | Other list in comments |
| 01 | Harbor porpoise | 2 | 87.6 | 3.5 | 123 | 84 | 19 | 8 | 10 | 30 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04 | Harbor seal | 1 | 46.7 | 2.0 | 111 | 77 | 27 | - | - | - | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 05 | Bottlenose dolphin | 2 | 75.8 | 2.6 | 202 | 116 | 32 | 116 | 19 | 50 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 3 |
| | | | . | . | | | | | | | | | | | | | | | |
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| | | | . | . | | | | | | | | | | | | | | | |
| Sketch and describe id, condition, marks, scars, etc: | | | Sketch and describe id, condition, marks, scars, etc: | | | | | Sketch and describe id, condition, marks, scars, etc: | | | General comments: | | | | | | | | |
| PSID # __01__ | | | PSID # __04__ | | | | | | | | All samples were double bagged and kept cold in a cooler with ice. Whole porpoise will be transported to the Woods Hole freezer today after landing. | | | | | | | | |
| Net marks around tip of snout and flukes. White foam coming out blowhole. Very fresh, no scavenger damage. | | | Id from multi-cusped, overlapping teeth. Slight scavenger damage around eyes and mouth. Eyes were cloudy blue. | | | | | | | | | | | | | | | | |

NMFS FISHERIES OBSERVER PROGRAM

MARINE MAMMAL BIOLOGICAL SAMPLE LOG (Back)

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|-----------------|---------|----|----|
| OBS/TRIP ID | A81025C | | |
| DATE LAND mm/yy | 01 | / | 01 |
| PAGE # | 2 | OF | 2 |

| | | | |
|--|---|---|---|
| Sketch and describe id, condition, marks, scars, etc: PSID # <u>05</u> Other samples collected: fetus, heart, liver. Id from stubby beak, wide girth, and conical teeth. Some rake marks on right side of caudal peduncle - see photos. | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | General comments: | |
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | BOTTLENOSE DOLPHIN: PSID # <u>05</u> A. snout - eye (cm) <u>30</u> B. snout - ear (cm) <u>34</u> C. snout - blow (cm) <u>32</u> D. snout - flip (cm) <u>48</u> | |
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ |
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ |

NMFS FISHERIES OBSERVER PROGRAM

MARINE MAMMAL BIOLOGICAL SAMPLE LOG (Front)

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| PSID # | SPECIES NAME | SEX 0 = U 1 = M 2 = F | MARINE MAMMAL MEASUREMENTS | | | | | CETACEANS ONLY | | | NUMBER OF SAMPLES TAKEN | | | | | | | | |
|---|--------------|--------------------------------|---|----------------------|-----------------|-------------------|----------------------|-------------------|----------------------|----------------|-------------------------|------------------------|-----|------|------|------|-------------|-------------|------------------------|
| | | | Body Temp °F | Blubber Thickness cm | Total Length cm | Axillary Girth cm | Hind/Pec Flip Len cm | Pec Flip Width cm | Dorsal Fin Height cm | Fluke Width cm | Whole | Finclip/ Flipper/ Skin | Jaw | Stom | Blub | Musc | Repro Tract | Head/ Skull | Other list in comments |
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| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | | | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | | | | | | | | General comments: | | | | | | | | |

NMFS FISHERIES OBSERVER PROGRAM**MARINE MAMMAL BIOLOGICAL SAMPLE LOG (Back)**

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|---|---|---|---|
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | General comments: | |
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | | |
| | | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ |
| Sketch and describe id, condition, marks, scars, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, etc: PSID # _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ |
| | | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ | BOTTLENOSE DOLPHIN: PSID # _____ A. snout - eye (cm) _____ B. snout - ear (cm) _____ C. snout - blow (cm) _____ D. snout - flip (cm) _____ |

SEA TURTLE BIOLOGICAL SAMPLE LOG

The purpose of this log is to record body measurements, scute counts and biological samples taken from all incidentally taken sea turtles. For more detailed instructions on incidental take sample collection, refer to the Sea Turtle Incidental Take and Biological Sampling Guidelines section of the NEFSC Observer Program Training Manual.

Do not record information on terrapins on this log. These animals should be recorded on the Individual Animal Log.

INSTRUCTIONS

For instructions on completing the Header fields **A**, **B** and **C**, refer to the Common Haul Log Data section of the NEFSC Observer Program Manual.

If any of the measurements cannot be collected, record a dash (-) in the field and record the reason why it wasn't obtained in COMMENTS.

1. PSID #: Record the consecutive identification number (Protected Species ID) for each animal that is sampled during this trip. This should be the same number as recorded on the Incidental Take Log.

2. SPECIES NAME: Record the complete common name of each incidentally taken sea turtle biologically sampled on this trip, as listed in Appendix A. Species Names.

NOTE: If it is not possible to make a positive species identification, identify the animal to the most specific generic group of which you are positive, *i.e.* Cheloniidae, *etc.* **DO NOT GUESS AT SPECIES IDENTIFICATION.**

3. SCANNED: Indicate whether or not all four flippers, head and shoulder areas were scanned for the presence of PIT Tags by recording the appropriate one digit code:

0 = No.
1 = Yes.

4. PIT TAG NUMBER: If a PIT Tag is present and detected by a PIT Tag Scanner record the complete al-

phanumeric number here.

NOTE: If the turtle is scanned for the presence of PIT Tags and none are found, record a dash (-) in this field.

MEASUREMENTS

Measurements are taken to the nearest **tenth** of a centimeter, over the curvature of the carapace (curvilinear), using a tape. If epibiota affect any of these measurements, record the details in COMMENTS.

5. TOTAL LENGTH: (Notch to tip) - Record the curvilinear length measurement of the carapace from the nuchal notch to the posterior marginal **tip**. See Figure 1.

6. NOTCH LENGTH: (Notch to notch) - Record the curvilinear length measurement of the carapace from the nuchal notch to the posterior marginal **notch**. See Figure 1.

7. WIDTH: Record the curvilinear width measurement of the carapace across the widest part of the shell. See Figure 1.

8. VERTEBRAL SCUTE COUNT: Record the number of vertebral scutes on the carapace of the turtle.

NOTE: The vertebral scutes are the plates that run down the middle of the carapace. See Figure 2.

9. LATERAL SCUTE COUNT: Record the number of lateral scutes on the carapace of the turtle.

NOTE: The lateral scutes are the plates that run on either side of the midline vertebral scutes. See Figure 2.

10. INFRAMARGINAL SCUTE COUNT: Record the number of inframarginal scutes on the carapace of the turtle.

NOTE: The inframarginal scutes are the plates that run down either side of the plastron, between the front and rear flippers. See Figure 2.

11. 1 PAIR PREFRONTALS?: Indicate whether or not the sea turtle has one pair of prefrontal scales by recording the most appropriate one digit code:

0 = No.

1 = Yes.

NOTE: The prefrontal scales are the scales between the eyes of the turtle. There should be either one or two pairs. See Figure 2.

12. OVERLAP SCUTES?: Indicate whether or not the sea turtle has overlapping scutes on the carapace by recording the most appropriate one digit code:

0 = No.

1 = Yes.

13. DORSAL COLOR CODE: Indicate the dorsal coloration of the sea turtle by recording the most appropriate 2 digit color code:

00 = Unknown.

01 = Black.

02 = Gray-Green.

03 = Orange/Red-Brown.

04 = Brown.

99 = Other, record the color in the COMMENTS section.

14. WHOLE ANIMAL RETAINED?: Record "1" if the sea turtle is retained by the observer to be brought to shore. Record "0" if the sea turtle is not retained.

SAMPLES

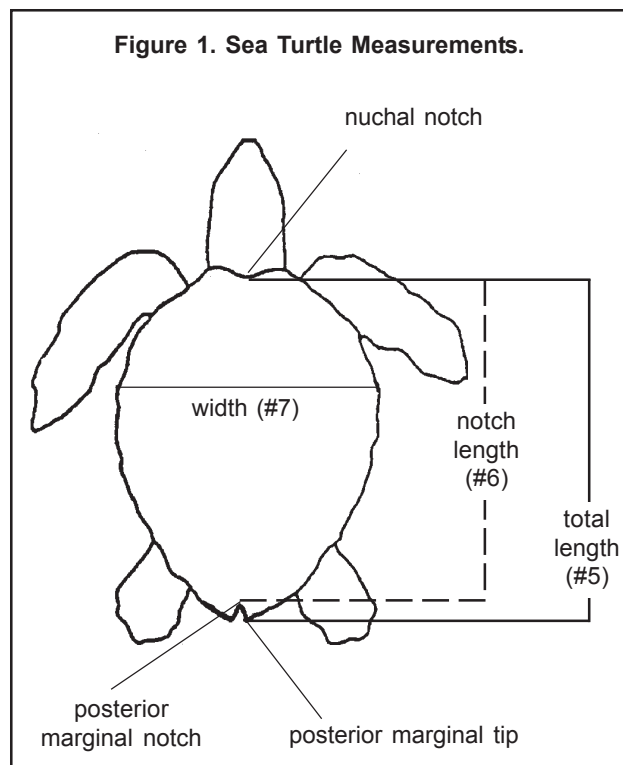
For the following fields, record the **total number** of samples taken. If a sample is not taken, or if the sea turtle is retained whole, record a "0" (zero).

15. BIOPSY/SKIN?

16. FLIPPER?

17. OTHER?: Record the number of additional samples collected.

NOTE: If any additional sample(s) is (are) collected from this sea turtle, record which ones in COMMENTS.



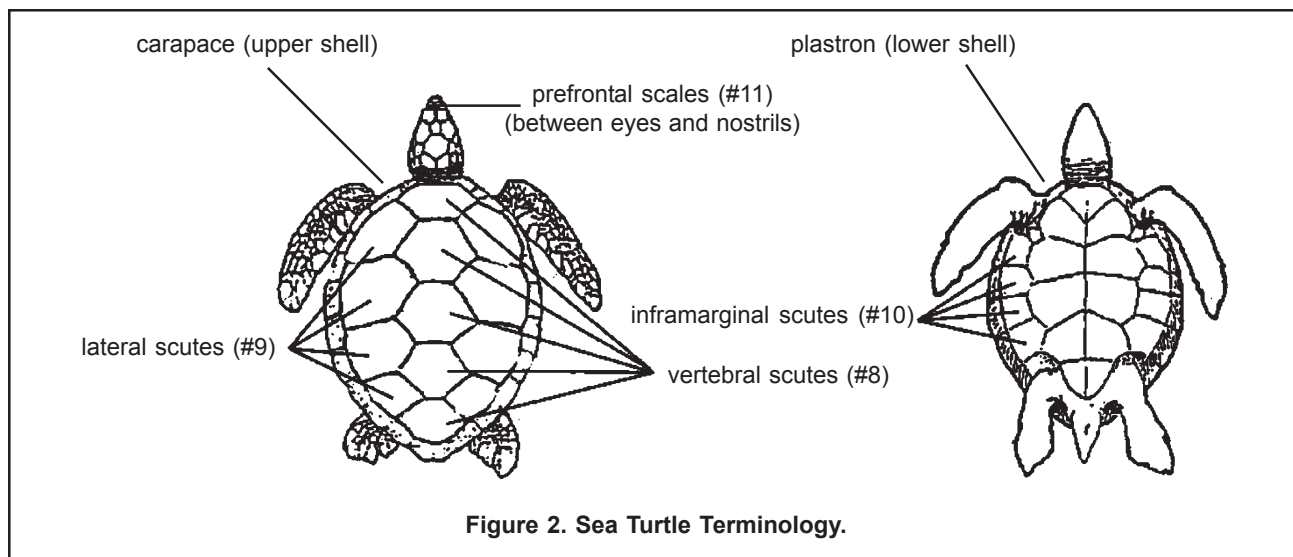
COMMENTS

Animal specific:

For **each animal** the observer must sketch and describe identifying characteristics, condition, marks, scars, gear on the animal, injuries, etc. Reference each description with the animal's unique PSID # (#1).

General:

Record any additional information regarding the sea turtle incidental take(s), especially when data are unable to be collected. Reference each comment with its corresponding field name.



NMFS FISHERIES OBSERVER PROGRAM

SEA TURTLE BIOLOGICAL SAMPLE LOG (Front)

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| PSID # | SPECIES NAME | TAGS | | MEASUREMENTS (Curv) | | | IDENTIFICATION CRITERIA | | | | | | NUMBER OF SAMPLES | | | | |
|---|--------------|---------------------|----------------|---|------------------------------------|-------------|-----------------------------|---------------------------------------|--------------------------------------|------------------------------------|-------------------------------|-------------------------|-------------------|--|---------|----------------------------------|--|
| | | Scan? 0=N 1=Y | Pit Tag Number | Notch-to- Tip Length cm | Notch-to- Notch Length cm | Width cm | Vertebral Scute Count | Lateral (Costal) Scute Count | Infra- marginal Scute Count | 1Pair Pre- Frontals? 0=N 1=Y | Overlap Scutes? 0=N 1=Y | Dorsal Color Code | Whole | Biopsy / Skin | Flipper | Other list in comments | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | |
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| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | | | | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | | | | | | General comments: | | | | DORSAL COLOR CODES: 01 = Black 02 = Gray-Green 03 = Orng/Red-Brown 04 = Brown 99 = Other 00 = Unknown | | | |

NMFS FISHERIES OBSERVER PROGRAM

SEA TURTLE BIOLOGICAL SAMPLE LOG (Back)

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|---|---|---|
| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | TURTLE KEY: A. Shell black and leathery with longitudinal ridges LEATHERBACK A. Shell not black and is hard B B. Lateral scutes 4 C B. Lateral scutes 5 D C. Two large scutes (1 pair) between eyes, shell smooth, mouth normal, shell color light brown with yellow star-burst patterns, top of flippers and head light brown GREEN C. Four scutes (2 pairs) between eyes, scutes overlapping, upper jaw has overhanging beak, shell color dark brown with light brown blotches. Top of flippers and head black HAWKSBILL C. Lower shell has 3 inframarginals, upper shell, head, and flippers are reddish brown LOGGERHEAD D. Lower shell has 4 inframarginals with pores, upper shell, head, and flippers are greenish gray KEMP'S RIDLEY |
| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | |
| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | |

NMFS FISHERIES OBSERVER PROGRAM

SEA TURTLE BIOLOGICAL SAMPLE LOG (Front)

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| PSID # | SPECIES NAME | TAGS | | MEASUREMENTS (Curv) | | | IDENTIFICATION CRITERIA | | | | | | NUMBER OF SAMPLES | | | |
|---|----------------------|-------------------------|----------------|---|------------------------------------|-----------------|-----------------------------|---------------------------------------|--------------------------------------|---|-----------------------------------|-------------------------|-------------------|---|---------|----------------------------------|
| | | Scan? 0=N 1=Y | Pit Tag Number | Notch-to- Tip Length cm | Notch-to- Notch Length cm | Width cm | Vertebral Scute Count | Lateral (Costal) Scute Count | Infra- marginal Scute Count | 1Pair Pre- Frontals? 0=N 1=Y | Overlap Scutes? 0=N 1=Y | Dorsal Color Code | Whole | Biopsy / Skin | Flipper | Other list in comments |
| 03 | Kemp's Ridley Turtle | 1 | | 33.0 | 32.2 | 27.0 | 5 | 5 | 4 | 0 | 0 | 02 | 1 | 0 | 0 | 0 |
| 05 | Loggerhead Turtle | 1 | | 61.3 | 60.8 | 58.1 | 5 | 5 | 3 | 0 | 0 | 03 | 0 | 0 | 0 | 0 |
| 06 | Green Turtle | 1 | | 38.5 | 38.0 | 33.2 | 5 | 4 | 1 | 1 | 0 | 02 | 0 | 1 | 1 | 0 |
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| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # ____03____ Inframarginal scutes had pores. Fresh laceration (5 cm long) in right fore-flipper. No indications of life. Tried to resuscitate for 4 hrs. | | | | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # ____06____ Flippers had one claw. Photos taken of carapace, head, and ventral surface. Animal was sampled. Carapace had a 10 cm crack and was bleeding. | | | | | | General comments: All turtles dropped from a height of 8 feet onto deck. | | | | DORSAL COLOR CODES: 01 = Black 02 = Gray-Green 03 = Orng/Red-Brown 04 = Brown 99 = Other 00 = Unknown | | |

NMFS FISHERIES OBSERVER PROGRAM

SEA TURTLE BIOLOGICAL SAMPLE LOG (Back)

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| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | TURTLE KEY: A. Shell black and leathery with longitudinal ridges LEATHERBACK A. Shell not black and is hard B B. Lateral scutes 4 C B. Lateral scutes 5 D C. Two large scutes (1 pair) between eyes, shell smooth, mouth normal, shell color light brown with yellow star-burst patterns, top of flippers and head light brown GREEN C. Four scutes (2 pairs) between eyes, scutes overlapping, upper jaw has overhanging beak, shell color dark brown with light brown blotches. Top of flippers and head black HAWKSBILL C. Lower shell has 3 inframarginals, upper shell, head, and flippers are reddish brown LOGGERHEAD D. Lower shell has 4 inframarginals with pores, upper shell, head, and flippers are greenish gray KEMP'S RIDLEY |
| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | |
| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | |

NMFS FISHERIES OBSERVER PROGRAM

SEA TURTLE BIOLOGICAL SAMPLE LOG (Front)

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| PSID # | SPECIES NAME | TAGS | | MEASUREMENTS (Curv) | | | IDENTIFICATION CRITERIA | | | | | | NUMBER OF SAMPLES | | | | |
|---|--------------|---------------------|----------------|---|------------------------------------|-------------|-----------------------------|---------------------------------------|--------------------------------------|------------------------------------|-------------------------------|-------------------------|-------------------|--|---------|----------------------------------|--|
| | | Scan? 0=N 1=Y | Pit Tag Number | Notch-to- Tip Length cm | Notch-to- Notch Length cm | Width cm | Vertebral Scute Count | Lateral (Costal) Scute Count | Infra- marginal Scute Count | 1Pair Pre- Frontals? 0=N 1=Y | Overlap Scutes? 0=N 1=Y | Dorsal Color Code | Whole | Biopsy / Skin | Flipper | Other list in comments | |
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| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | | | | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | | | | | | General comments: | | | | DORSAL COLOR CODES: 01 = Black 02 = Gray-Green 03 = Orng/Red-Brown 04 = Brown 99 = Other 00 = Unknown | | | |

NMFS FISHERIES OBSERVER PROGRAM

SEA TURTLE BIOLOGICAL SAMPLE LOG (Back)

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| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | TURTLE KEY: A. Shell black and leathery with longitudinal ridges LEATHERBACK A. Shell not black and is hard B B. Lateral scutes 4 C B. Lateral scutes 5 D C. Two large scutes (1 pair) between eyes, shell smooth, mouth normal, shell color light brown with yellow star-burst patterns, top of flippers and head light brown GREEN C. Four scutes (2 pairs) between eyes, scutes overlapping, upper jaw has overhanging beak, shell color dark brown with light brown blotches. Top of flippers and head black HAWKSBILL C. Lower shell has 3 inframarginals, upper shell, head, and flippers are reddish brown LOGGERHEAD D. Lower shell has 4 inframarginals with pores, upper shell, head, and flippers are greenish gray KEMP'S RIDLEY |
| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | |
| Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | Sketch and describe id, condition, marks, scars, tag location, gear on the animal, injuries, etc: PSID # _____ | |

Appendix A. Species Names

| | |
|-------------------------------|--------------------------------------|
| ALEWIFE | <i>Alosa pseudoharengus</i> |
| ALLIGATORFISH | <i>Aspidophoroides monopterygius</i> |
| AMBERJACK, NK | <i>Seriola</i> sp |
| ANCHOVY, BAY | <i>Anchoa mitchilli</i> |
| ANCHOVY, NK | Engraulidae |
| ANCHOVY, STRIPED | <i>Anchoa hepsetus</i> |
| ANEMONE, NK | Anthozoa |
| ARGENTINE, ATLANTIC | <i>Argentina silus</i> |
| BARRACUDA, NK | <i>Sphyraena</i> sp |
| BARRELFISH | <i>Hyperoglyphe perciformis</i> |
| BASS, STRIPED | <i>Morone saxatilis</i> |
| BATFISH, ATLANTIC | <i>Dibranchius atlanticus</i> |
| BATFISH, NK | Ogcocephalidae |
| BEARDFISH | <i>Polymixia lowei</i> |
| BIRD, NK | Aves |
| BLENNY, NK (Fish) | Blenniidae |
| BLUEFISH | <i>Pomatomus saltatrix</i> |
| BOARFISH, DEEPBODY | <i>Antigonia capros</i> |
| BOARFISH, NK | Caproidae |
| BOARFISH, SHORTSPINE | <i>Antigonia combatia</i> |
| BONITO, ATLANTIC | <i>Sarda sarda</i> |
| BOOBY, BROWN | <i>Sula leucogaster</i> |
| BOOBY, MASKED | <i>Sula dactylatra</i> |
| BUTTERFISH | <i>Peprilus triacanthus</i> |
| CAPELIN | <i>Mallotus villosus</i> |
| CARP | <i>Cyprinus carpio</i> |
| CLAM, BLOODARC | <i>Anadara ovalis</i> |
| CLAM, NK | Bivalvia |
| CLAM, RAZOR | <i>Ensis directus</i> |
| CLAM, SOFT-SHELLED | <i>Mya arenaria</i> |
| CLAM, STIMPSONS SURF (Arctic) | <i>Spisula polynyma</i> |
| CLAM, SURF | <i>Spisula solidissima</i> |
| COBIA | <i>Rachycentron canadum</i> |
| COD, ATLANTIC | <i>Gadus morhua</i> |
| CODLING, METALLIC | <i>Physiculus fulvus</i> (Hakeling) |
| CORAL, STONY, NK | Astrangiidae |
| CORMORANT, DBL CREST | <i>Phalacrocorax auritus</i> |
| CORMORANT, GREAT | <i>Phalacrocorax carbo</i> |
| CORMORANT, NK | <i>Phalacrocorax</i> sp |
| CRAB, BLUE | <i>Callinectes sapidus</i> |
| CRAB, CANCER, NK | <i>Cancer</i> sp |
| CRAB, DEEP SEA, RED | <i>Chaceon quinquedens</i> |
| CRAB, GREEN | <i>Carcinus maenas</i> |
| CRAB, HERMIT, NK | Paguroidea |
| CRAB, HORSESHOE | <i>Limulus polyphemus</i> |
| CRAB, JONAH | <i>Cancer borealis</i> |
| CRAB, LADY | <i>Ovalipes ocellatus</i> |

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|------------------------------|-----------------------------------|
| CRAB, NORTHERN STONE | <i>Lithodes maja</i> |
| CRAB, ROCK | <i>Cancer irroratus</i> |
| CRAB, SNOW (Queen) | <i>Chionoecetes opilio</i> |
| CRAB, SPECKLED | <i>Arenaeus cribrarius</i> |
| CRAB, SPIDER, NK | <i>Libinia, Pelia</i> sp |
| CRAB, SPIDER, PORTLY | <i>Libinia emarginata</i> |
| CRAB, TRUE, NK | Brachyura |
| CRAPPIE, NK | <i>Pomoxis</i> sp |
| CROAKER, ATLANTIC | <i>Micropogonias undulatus</i> |
| CUNNER (Yellow Perch) | <i>Tautoglabrus adspersus</i> |
| CUSK | <i>Brosme brosme</i> |
| CUSK-EEL, NK | Ophidiidae |
| CUTLASSFISH, ATL | <i>Trichiurus lepturus</i> |
| DEALFISH (Ribbonfish) | <i>Trachipterus arcticus</i> |
| DOGFISH, CHAIN | <i>Scyliorhinus retifer</i> |
| DOGFISH, NK | <i>Mustelus, Squalus</i> sp |
| DOGFISH, SMOOTH | <i>Mustelus canis</i> |
| DOGFISH, SPINY | <i>Squalus acanthias</i> |
| DOLPHIN, BOTTLENOSE | <i>Tursiops truncatus</i> |
| DOLPHIN, CLYMENE | <i>Stenella clymene</i> |
| DOLPHIN, FRASER'S | <i>Lagenodelphis hosei</i> |
| DOLPHIN, NK (Mammal) | Delphinidae |
| DOLPHIN, PANTROPICAL SPOTTED | <i>Stenella attenuata</i> |
| DOLPHIN, RISSO'S | <i>Grampus griseus</i> |
| DOLPHIN, ROUGH TOOTH | <i>Steno bredanensis</i> |
| DOLPHIN, SADDLEBACK (Common) | <i>Delphinus delphis</i> |
| DOLPHIN, SPINNER | <i>Stenella longirostris</i> |
| DOLPHIN, SPOTTED, ATL | <i>Stenella frontalis</i> |
| DOLPHIN, SPOTTED, NK | <i>Stenella</i> sp |
| DOLPHIN, STRIPED | <i>Stenella coeruleoalba</i> |
| DOLPHIN, WHITEBEAKED | <i>Lagenorhynchus albirostris</i> |
| DOLPHIN, WHITESIDED | <i>Lagenorhynchus acutus</i> |
| DOLPHINFISH (Mahi Mahi) | <i>Coryphaena hippurus</i> |
| DORY, BUCKLER (John) | <i>Zenopsis conchifera</i> |
| DORY, NK | Zeidae |
| DOVEKIE | <i>Alle alle</i> |
| DRAGONFISH, BOA | <i>Stomias boa</i> |
| DRUM, BLACK | <i>Pogonias cromis</i> |
| DRUM, NK | Sciaenidae |
| DRUM, RED | <i>Sciaenops ocellatus</i> |
| ECHINODERM, NK | Echinodermata |
| EEL, AMERICAN | <i>Anguilla rostrata</i> |
| EEL, CONGER | <i>Conger oceanicus</i> |
| EEL, GARDEN, NK | <i>Heteroconger</i> sp |
| EEL, NK | Anguilliformes |
| EEL, ROCK (GUNNEL) | <i>Pholis gunnellus</i> |
| EEL, SLENDER SNIPE | <i>Nemichthys scolopaceus</i> |
| EELGRASS | <i>Zostera marina</i> |
| EELPOUT, NK | <i>Lycenchelys, Lycodes</i> sp |
| ESCOLAR | <i>Lepidocybium flavobrunneum</i> |

FILEFISH, NK
 FISH, DEEP-WATER, NK
 FISH, NK
 FLOUNDER, AMERICAN PLAICE
 FLOUNDER, FOURSPOT
 FLOUNDER, GULFSTREAM
 FLOUNDER, LEFTEYE, NK
 FLOUNDER, NK
 FLOUNDER, SAND DAB (Windowpane)
 FLOUNDER, SOUTHERN
 FLOUNDER, SUMMER (Fluke)
 FLOUNDER, WINTER (Blackback)
 FLOUNDER, WITCH (Grey Sole)
 FLOUNDER, YELLOWTAIL
 FRIGATEBIRD, MAGNIFICENT
 FULMAR, NORTHERN
 GANNET, NORTHERN
 GAPER, RED EYE
 GARFISH (Needlefish)
 GREBE, HORNED
 GREBE, NK
 GREBE, PIED BILLED
 GREBE, RED NECKED
 GRENADIER, COMMON (Marlin spike)
 GRENADIER, LONG-NOSED
 GRENADIER, NK
 GRENADIER, ROUGHEAD
 GROUPER, NK
 GROUPER, SNOWY
 GRUNT, NK
 GUILLEMOT, BLACK
 GULL, BLACK-HEADED
 GULL, BONAPARTE'S
 GULL, FRANKLIN'S
 GULL, GLAUCOUS
 GULL, GREAT BLACK-BACK
 GULL, HERRING
 GULL, ICELAND
 GULL, IVORY
 GULL, LAUGHING
 GULL, LESS BLACK-BACK
 GULL, LITTLE
 GULL, MEW
 GULL, NK
 GULL, RING BILLED
 GULL, ROSS'S
 GULL, SABINE'S
 GULL, THAYER'S
 HADDOCK
 HAGFISH, ATLANTIC

Monacanthidae
 Osteichthyes
Hippoglossoides platessoides
Paralichthys oblongus
Citharichthys arctifrons
 Bothidae
 Pleuronectiformes
Scophthalmus aquosus
Paralichthys lethostigma
Paralichthys dentatus
Pleuronectes americanus
Glyptocephalus cynoglossus
Pleuronectes ferrugineus
Fregata magnificens
Fulmarus glacialis
Sula bassanus
Chaunax stigmaeus
 Belonidae
Podiceps auritus
 Podicipedidae
Podilymbus podiceps
Podiceps grisegena
Nezumia bairdi
Caelorinchus carminatus
 Macrouridae
Macrourus berglax
Epinephelus, Mycteroperca sp
Epinephelus niveatus
Haemulon, Anisotremus sp
Cepphus grylle
Larus ridibundus
Larus philadelphia
Larus pipixcan
Larus hyperboreus
Larus marinus
Larus argentatus
Larus glaucoides
Pagophila eburnea
Larus atricilla
Larus fuscus
Larus minutus
Larus canus
 Laridae
Larus delawarensis
Rhodostethia rosea
Xema sabini
Larus thayeri
Melanogrammus aeglefinus
Myxine glutinosa

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|----------------------------|---|
| HAKE, BLUE | <i>Antimora rostrata</i> |
| HAKE, LONGFIN | <i>Urophycis chesteri</i> |
| HAKE, NK | <i>Urophycis</i> , <i>Merluccius</i> , <i>Physiculus</i> sp |
| HAKE, RED (Ling) | <i>Urophycis chuss</i> |
| HAKE, SILVER (Whiting) | <i>Merluccius bilinearis</i> |
| HAKE, SOUTHERN | <i>Urophycis floridana</i> |
| HAKE, SPOTTED | <i>Urophycis regia</i> |
| HAKE, WHITE | <i>Urophycis tenuis</i> |
| HALIBUT, ATLANTIC | <i>Hippoglossus hippoglossus</i> |
| HALIBUT, GREENLAND | <i>Reinhardtius hippoglossoides</i> |
| HARVESTFISH | <i>Peprilus alepidotus</i> |
| HERRING, ATLANTIC | <i>Clupea harengus</i> |
| HERRING, BLUEBACK | <i>Alosa aestivalis</i> |
| HERRING, NK (Shad) | Clupeidae |
| HOGCHOCKER | <i>Trinectes maculatus</i> |
| HOGFISH, ATLANTIC | <i>Lachnolaimus maximus</i> |
| INVERTEBRATE, NK | Invertebrata |
| JACK, CREVALLE | <i>Caranx hippos</i> |
| JACK, NK | Carangidae |
| JAEGER, LONG TAILED | <i>Stercorarius longicaudus</i> |
| JAEGER, NK | Stercorariidae |
| JAEGER, PARASITIC | <i>Stercorarius parasiticus</i> |
| JAEGER, POMARINE | <i>Stercorarius pomarinus</i> |
| JAEGER, SOUTH POLAR | <i>Catharacta maccormicki</i> |
| JELLYFISH, NK | Scyphozoa |
| KINGFISH, GULF | <i>Menticirrhus littoralis</i> |
| KINGFISH, NK (Sea mullet) | <i>Menticirrhus</i> sp |
| KINGFISH, NORTHERN | <i>Menticirrhus saxatilis</i> |
| KINGFISH, SOUTHERN | <i>Menticirrhus americanus</i> |
| KITTIWAKE, BLK-LEGGD | <i>Rissa tridactyla</i> |
| LADYFISH | <i>Elops saurus</i> |
| LAMPREY, NK | Petromyzontidae |
| LAMPSHELL, NK | Brachiopoda |
| LANCE, SAND, NK | <i>Ammodytes</i> sp |
| LANCETFISH, NK | Alepisauridae |
| LANTERNFISH, NK | Myctophidae |
| LEATHERJACKET | <i>Oligoplites saurus</i> |
| LIZARDFISH, NK | Synodontidae |
| LOBSTER, AMERICAN | <i>Homarus americanus</i> |
| LOOKDOWN | <i>Selene vomer</i> |
| LOON, ARCTIC | <i>Gavia arctica</i> |
| LOON, COMMON | <i>Gavia immer</i> |
| LOON, NK | Gaviidae |
| LOON, RED-THROATED | <i>Gavia stellata</i> |
| LOUVAR | <i>Luvarus imperialis</i> |
| LUMPFISH | <i>Cyclopterus lumpus</i> |
| LUMPSUCKER, ATLANTIC SPINY | <i>Eumicrotremus spinosus</i> |
| MACKEREL, ATLANTIC | <i>Scomber scombrus</i> |
| MACKEREL, CHUB | <i>Scomber japonicus</i> |
| MACKEREL, FRIGATE | <i>Auxis thazard</i> |

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|------------------------------|---------------------------------|
| MACKEREL, KING | <i>Scomberomorus cavalla</i> |
| MACKEREL, NK | Scombridae |
| MACKEREL, SNAKE, NK | Gempylidae |
| MACKEREL, SPANISH | <i>Scomberomorus maculatus</i> |
| MARINE MAMMAL, NK | Cetacea/Pinnipedia |
| MARLIN, BLUE | <i>Makaira nigricans</i> |
| MARLIN, NK | Istiophoridae |
| MARLIN, WHITE | <i>Tetrapturus albidus</i> |
| MENHADEN, ATLANTIC (Bunker) | <i>Brevoortia tyrannus</i> |
| MERGANSER, NK | Merginae |
| MOLA, NK | Molidae |
| MOLA, OCEAN SUNFISH | <i>Mola mola</i> |
| MOLA, SHARPTAIL | <i>Mola lanceolata</i> |
| MOLA, SLENDER | <i>Ranzania laevis</i> |
| MOLLUSK, NK | Mollusca |
| MONKFISH (Angler, Goosefish) | <i>Lophius americanus</i> |
| MOONFISH, ATLANTIC | <i>Selene setapinnis</i> |
| MULLET, NK | Mugilidae |
| MULLET, STRIPED (Jumping) | <i>Mugil cephalus</i> |
| MUMMICHOG | <i>Fundulus heteroclitus</i> |
| MURRE, NK | <i>Uria</i> sp |
| MURRE, THICK-BILLED | <i>Uria lomvia</i> |
| MURRE, THIN-BILLED | <i>Uria aalge</i> |
| MUSSEL, NK | <i>Mytilus, Modiolus</i> sp |
| NEEDLEFISH, ATLANTIC | <i>Strongylura marina</i> |
| NODDY, BROWN | <i>Anous stolidus</i> |
| OCEAN POUT | <i>Macrozoarces americanus</i> |
| OCTOPUS, NK | Cephalopoda |
| OILFISH | <i>Ruvettus pretiosus</i> |
| OPAH | <i>Lampris guttatus</i> |
| OYSTER, COMMON | <i>Crassostrea virginica</i> |
| OYSTER, EUROPEAN FLAT | <i>Ostrea edulis</i> |
| PELAGIC FISH, NK | |
| PELICAN, BROWN | <i>Pelecanus occidentalis</i> |
| PERCH, SAND | <i>Diplectrum formosum</i> |
| PERCH, WHITE | <i>Morone americana</i> |
| PERCH, YELLOW | <i>Perca flavescens</i> |
| PERIWINKLE, COMMON | <i>Littorina littorea</i> |
| PERMIT | <i>Trachinotus falcatus</i> |
| PETREL, TRINIDADE (Herald) | <i>Pterodroma arminjoniana</i> |
| PHALAROPE, RED | <i>Phalaropus fulicarius</i> |
| PIGFISH | <i>Orthopristis chrysoptera</i> |
| PILOTFISH | <i>Naucrates ductor</i> |
| PINFISH | <i>Lagodon rhomboides</i> |
| PIPEFISH/SEAHORSE, NK | Syngnathidae |
| POLLOCK | <i>Pollachius virens</i> |
| POMFRET, ATLANTIC | <i>Brama brama</i> |
| POMFRET, BIGSCALE | <i>Taratichthys longipinnis</i> |
| POMFRET, NK | Bramidae |
| POMPANO, AFRICAN | <i>Alectis ciliaris</i> |

POMPAÑO, FLORIDA
 PORCUPINEFISH
 PORGY, NK
 PORGY, RED
 PORPOISE, HARBOR
 PORPOISE/DOLPHIN, NK
 PUFFER, NK (Burrfish, nk)
 PUFFER, NORTHERN
 PUFFIN, ATLANTIC
 QUAHOG, HARD SHELL CLAM
 QUAHOG, OCEAN (Black clam)
 RAVEN, SEA
 RAY, BULLNOSE
 RAY, BUTTERFLY, NK
 RAY, BUTTERFLY, SMOOTH
 RAY, BUTTERFLY, SPINY
 RAY, COWNOSE
 RAY, DEVIL
 RAY, EAGLE, NK
 RAY, NK
 RAY, TORPEDO
 RAY,MANTA, ATLANTIC
 RAY,MANTA,NK
 RAZORBILL
 REDFISH, NK (Ocean Perch)
 REMORA, NK
 RIBBONFISH, NK
 RIBBONFISH,POLKA-DOT
 RIBBONFISH,SCALLOPED
 ROCKLING, FOURBEARD
 ROCKWEED, NK
 ROSEFISH, BLACK BELLY
 ROUGHY, BIG
 ROUGHY, NK
 RUNNER, BLUE
 SAILFISH
 SALMON, ATLANTIC
 SALMON, NK
 SALMON, PINK
 SAND DOLLAR
 SAURY, ATLANTIC
 SCAD, BIGEYE
 SCAD, MACKEREL
 SCAD, NK
 SCAD, ROUGH
 SCALLOP, BAY
 SCALLOP, CALICO
 SCALLOP, ICELANDIC
 SCALLOP, NK
 SCALLOP, SEA

Trachinotus carolinus
Diodon hystrix
 Sparidae
Pagrus pagrus
Phocoena phocoena
 Phocoenidae/Delphinidae
 Tetraodontidae/Diodontidae
Sphoeroides maculatus
Fratercula arctica
Mercenaria mercenaria, *M.campechiensis*
Artica islandica
Hemitripterus americanus
Myliobatis freminvillei
Gymnura sp
Gymnura micrura
Gymnura altavela
Rhinoptera bonasus
Mobula hypostoma
 Myliobatidae
 Rajiformes
Torpedo nobiliana
Manta birostris
 Mobulidae
Alca torda
Sebastes sp
 Echineidae
 Trachipteridae
Desmodema polystictum
Zu cristatus
Enchelyopus cimbrius
Fucus sp
Helicolenus dactylopterus
Gephyroberyx darwini
 Trachichthyidae
Caranx crysos
Istiophorus platypterus
Salmo salar
 Salmonidae
Oncorhynchus gorboscha
Echinarachnius parma
Scomberesox saurus
Selar crumenophthalmus
Decapterus macarellus
Decapterus, *Selur*, *Trachurus* sp
Trachurus lathami
Argopecten irradians
Aequipecten gibbus
Chlamys islandica
 Pectinidae
Placopecten magellanicus

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| SCORPIONFISH, NK | Scorpaenidae |
| SCOTER, BLACK | <i>Melanitta nigra</i> |
| SCOTER, NK | <i>Melanitta</i> sp |
| SCOTER, SURF | <i>Melanitta perspicillata</i> |
| SCOTER, WHITE-WINGED | <i>Melanitta deglandi</i> |
| SCULPIN, LONGHORN | <i>Myoxocephalus octodecimspinosus</i> |
| SCULPIN, NK | Cottidae |
| SCUP | <i>Stenotomus chrysops</i> |
| SEA BASS, BLACK | <i>Centropristis striata</i> |
| SEA BASS, NK | Serranidae |
| SEA CUCUMBER, NK | Holothuroidea |
| SEA PANSY | <i>Renilla reniformis</i> |
| SEA PEN | <i>Pennatula aculeata</i> |
| SEA POTATO | <i>Leathesia difformis</i> |
| SEA ROBIN, ARMORED | <i>Peristedion miniatum</i> |
| SEA ROBIN, NK | Triglidae |
| SEA ROBIN, NORTHERN | <i>Prionotus carolinus</i> |
| SEA ROBIN, STRIPED | <i>Prionotus evolans</i> |
| SEA SQUIRT, NK | Ascidiacea |
| SEA URCHIN, NK | Echinoidea |
| SEAL, BEARDED | <i>Erignathus barbatus</i> |
| SEAL, GRAY | <i>Halichoerus grypus</i> |
| SEAL, HARBOR | <i>Phoca vitulina</i> |
| SEAL, HARP | <i>Phoca groenlandica</i> |
| SEAL, HOODED | <i>Cystophora cristata</i> |
| SEAL, LARGA (SPOTTED) | <i>Phoca largha</i> |
| SEAL, NK | Phocidae |
| SEAL, RIBBON | <i>Phoca fasciata</i> |
| SEAL, RINGED | <i>Phoca hispida</i> |
| SEATROUT, NK | <i>Cynoscion</i> sp |
| SEATROUT, SPOTTED (Speckled trout) | <i>Cynoscion nebulosus</i> |
| SEAWEED, NK | Phaeophyta |
| SHAD, AMERICAN | <i>Alosa sapidissima</i> |
| SHAD, GIZZARD | <i>Dorosoma cepedianum</i> |
| SHAD, HICKORY | <i>Alosa mediocris</i> |
| SHANNY, NK | <i>Lumpenus, Stichaeus, Ulvaria</i> sp |
| SHARK, ATL ANGEL | <i>Squatina dumerili</i> |
| SHARK, ATL SHARPNOSE | <i>Rhizoprionodon terraenovae</i> |
| SHARK, BASKING | <i>Cetorhinus maximus</i> |
| SHARK, BIGNOSE | <i>Carcharhinus altimus</i> |
| SHARK, BLACK TIP | <i>Carcharhinus limbatus</i> |
| SHARK, BLUE (Blue Dog) | <i>Prionace glauca</i> |
| SHARK, BONNETHEAD | <i>Sphyrna tiburo</i> |
| SHARK, BULL | <i>Carcharhinus leucas</i> |
| SHARK, CARCHARHIN, NK | <i>Carcharhinus</i> sp |
| SHARK, DEEP-WATER, NK | |
| SHARK, DUSKY | <i>Carcharhinus obscurus</i> |
| SHARK, FINETOOTH | <i>Carcharhinus isodon</i> |
| SHARK, HAMMERHEAD, GREAT | <i>Sphyrna mokarran</i> |
| SHARK, HAMMERHEAD, SCALLOPED | <i>Sphyrna lewini</i> |

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| SHARK, HAMMERHEAD, SMOOTH | <i>Sphyrna zygaena</i> |
| SHARK, HAMMERHEAD, NK | Sphyrnidae |
| SHARK, LEMON | <i>Negaprion brevirostris</i> |
| SHARK, MAKO, LONG FIN | <i>Isurus paucus</i> |
| SHARK, MAKO, NK | <i>Isurus</i> sp |
| SHARK, MAKO, SHORTFIN | <i>Isurus oxyrinchus</i> |
| SHARK, NIGHT | <i>Carcharhinus signatus</i> |
| SHARK, NK | Elasmobranchii |
| SHARK, NURSE | <i>Ginglymostoma cirratum</i> |
| SHARK, OCEANIC WHITETIP | <i>Carcharhinus longimanus</i> |
| SHARK, PELAGIC | |
| SHARK, PORBEAGLE (Mackerel Shark) | <i>Lamna nasus</i> |
| SHARK, SAND TIGER | <i>Odontaspis taurus</i> |
| SHARK, SANDBAR (Brown Shark) | <i>Carcharhinus plumbeus</i> |
| SHARK, SILKY | <i>Carcharhinus falciformis</i> |
| SHARK, SPINNER | <i>Carcharhinus brevipinna</i> |
| SHARK, THRESHER | <i>Alopias vulpinus</i> |
| SHARK, THRESHER, BIGEYE | <i>Alopias superciliosus</i> |
| SHARK, TIGER | <i>Galeocerdo cuvier</i> |
| SHARK, WHITE | <i>Carcharodon carcharias</i> |
| SHEARWATER, AUDUBON'S | <i>Puffinus lherminieri</i> |
| SHEARWATER, CORY'S | <i>Puffinus diomedea</i> |
| SHEARWATER, GREATER | <i>Puffinus gravis</i> |
| SHEARWATER, LITTLE | <i>Puffinus assimilis</i> |
| SHEARWATER, MANX | <i>Puffinus puffinus</i> |
| SHEARWATER, NK | <i>Puffinus</i> sp |
| SHEARWATER, SOOTY | <i>Puffinus griseus</i> |
| SHEEPSHEAD | <i>Archosargus probatocephalus</i> |
| SHELLFISH, NK | |
| SHRIMP, MANTIS | <i>Squilla empusa</i> |
| SHRIMP, NK | Caridea |
| SHRIMP, PANDALID, NK (Northern) | <i>Pandalus</i> sp |
| SHRIMP, PENAEID, NK (Southern) | <i>Penaeus</i> sp |
| SHRIMP, ROYAL RED | <i>Pleoticus robustus</i> |
| SHRIMP, SCARLET | <i>Plesiopenaeus edwardsianus</i> |
| SHRIMP, SHORE, NK | <i>Palaemonetes</i> sp |
| SILVERSIDE, ATLANTIC | <i>Menidia menidia</i> |
| SILVERSIDE, NK | Atherinidae |
| SKATE, BARNDOR | <i>Dipturus laevis</i> |
| SKATE, CLEARNOSE | <i>Raja eglanteria</i> |
| SKATE, LITTLE | <i>Leucoraja erinacea</i> |
| SKATE, NK | Rajidae |
| SKATE, ROSETTTE | <i>Leucoraja garmani</i> |
| SKATE, SMOOTH | <i>Malacoraja senta</i> |
| SKATE, THORNY | <i>Amblyraja radiata</i> |
| SKATE, WINTER (Big) | <i>Leucoraja ocellata</i> |
| SKIMMER, BLACK | <i>Rynchops niger</i> |
| SKUA, GREAT | <i>Catharacta skua</i> |
| SMELT, RAINBOW | <i>Osmerus mordax</i> |
| SNAIL, MOONHELL, NK | Naticidae |

SNAIL, NK
 SNAKEBLENNY
 SNAPPER, DOG
 SNAPPER, NK
 SNAPPER, RED
 SNAPPER, VERMILLION
 SNIPEFISH, LONGSPINE
 SNIPEFISH, NK
 SNIPEFISH, SLENDER
 SPADEFISH
 SPEARFISH, LONGBILL
 SPONGE, NK
 SPOT
 SQUID, ATL LONG-FIN
 SQUID, NK
 SQUID, SHORT-FIN (Boreal)
 SQUIRRELFISH, NK
 STARFISH, BRITTLE, NK
 STARFISH, SEASTAR, NK
 STARGAZER, NK
 STINGRAY, ATLANTIC
 STINGRAY, BLUNTNOSE
 STINGRAY, NK
 STINGRAY, PELAGIC
 STINGRAY, ROUGHTAIL
 STORM PETREL, BAND-RUMPED
 STORM PETREL, LEACHS
 STORM PETREL, NK
 STORM PETREL, WHITE-FACED
 STORM PETREL, WILSON
 STURGEON, ATLANTIC
 STURGEON, NK
 STURGEON, SHORTNOSE
 SWORDFISH
 TARPON
 TAUTOG (Blackfish)
 TERN, ARCTIC
 TERN, BLACK
 TERN, BRIDLED
 TERN, CASPIAN
 TERN, COMMON
 TERN, FORSTER'S
 TERN, GULL-BILLED
 TERN, LITTLE
 TERN, NK
 TERN, ROSEATE
 TERN, ROYAL
 TERN, SANDWICH
 TERN, SOOTY
 TERRAPIN, DIAMONDBACK

Gastropoda
Lumpenus lumpretaeformis
Lutjanus jocu
 Lutjanidae
Lutjanus campechanus
Rhomboplites aurorubens
Macrorhamphosus scolopax
 Centriscidae
Macrorhamphosus gracilis
Chaetodipterus faber
Tetrapturus pfluegeri
 Porifera
Leiostomus xanthurus
Loligo pealei
 Cephalopoda
Illex illecebrosus
 Holocentridae
 Ophiuroidea
 Asteroidea
 Uranoscopidae
Dasyatis sabina
Dasyatis say
 Dasyatidae
Dasyatis violacea
Dasyatis centroura
Oceanodroma castro
Oceanodroma leucorhoa
 Hydrobatidae
Pelagodroma marina
Oceanites oceanicus
Acipenser oxyrhynchus
 Acipenseridae
Acipenser brevirostrum
Xiphias gladius
Megalops atlanticus
Tautoga onitis
Sterna paradisaea
Chlidonias niger
Sterna anaethetus
Sterna caspia
Sterna hirundo
Sterna forsteri
Gelochelidon nilotica
Sterna albifrons
 Sterninae
Sterna dougallii
Sterna maxima
Sterna sandvicensis
Sterna fuscata
Malaclemys terrapin

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| TILEFISH | <i>Lopholatilus chamaeleonticeps</i> |
| TILEFISH, BLUELINE | <i>Caulolatilus microps</i> |
| TILEFISH, GOLDEN | <i>Caulolatilus chrysops</i> |
| TOADFISH, NK | Batrachoididae |
| TOADFISH, OYSTER | <i>Opsanus tau</i> |
| TOMCOD, ATLANTIC | <i>Microgadus tomcod</i> |
| TRIGGERFISH, NK (Leatherjackets) | Balistidae |
| TRIPLETAIL | <i>Lobotes surinamensis</i> |
| TROPICBIRD, WHITE-TAILED | <i>Phaethon lepturus</i> |
| TUNA, ALBACORE | <i>Thunnus alalunga</i> |
| TUNA, BIG EYE | <i>Thunnus obesus</i> |
| TUNA, BLACKFIN | <i>Thunnus atlanticus</i> |
| TUNA, BLUEFIN | <i>Thunnus thynnus</i> |
| TUNA, LITTLE (False Albacore, Little Tunny) | <i>Euthynnus alletteratus</i> |
| TUNA, NK | <i>Euthynnus</i> , <i>Thunnus</i> sp |
| TUNA, SKIPJACK | <i>Katsuwonus pelamis</i> |
| TUNA, YELLOWFIN | <i>Thunnus albacares</i> |
| TURTLE, GREEN | <i>Chelonia mydas</i> |
| TURTLE, HAWKSBILL | <i>Eretmochelys imbricata</i> |
| TURTLE, KEMP'S RIDLEY | <i>Lepidochelys kempii</i> |
| TURTLE, LEATHERBACK | <i>Dermochelys coriacea</i> |
| TURTLE, LOGGERHEAD | <i>Caretta caretta</i> |
| TURTLE, SEA, NK | Cheloniidae |
| TURTLE, OLIVE RIDLEY | <i>Lepidochelys olivacea</i> |
| TURTLE, SLIDER, POND | <i>Trachemys scripta</i> |
| TURTLE, SNAPPER | <i>Chelydra serpentina</i> |
| WAHOO | <i>Acanthocybium solanderi</i> |
| WEAKFISH (Squeteague sea trout/Grey trout) | <i>Cynoscion regalis</i> |
| WHALE, BALEEN, NK | Mysticeti |
| WHALE, BELUGA | <i>Delphinapterus leucas</i> |
| WHALE, BK, BLAINVILLE'S (Dense) | <i>Mesoplodon densirostris</i> |
| WHALE, BK, CUVIER'S (Goosebeaked) | <i>Ziphius cavirostris</i> |
| WHALE, BK, GERVAIS' (Antillean) | <i>Mesoplodon europaeus</i> |
| WHALE, BK, MESOP, NK | <i>Mesoplodon</i> sp |
| WHALE, BK, SOWERBY'S (North Sea) | <i>Mesoplodon bidens</i> |
| WHALE, BK, TRUE'S | <i>Mesoplodon mirus</i> |
| WHALE, BLUE | <i>Balaenoptera musculus</i> |
| WHALE, BRYDE'S | <i>Balaenoptera brydei</i> |
| WHALE, DWARF SPERM | <i>Kogia sima</i> |
| WHALE, FALSE KILLER | <i>Pseudorca crassidens</i> |
| WHALE, FINBACK | <i>Balaenoptera physalus</i> |
| WHALE, HUMPBACK | <i>Megaptera novaeangliae</i> |
| WHALE, KILLER | <i>Orcinus orca</i> |
| WHALE, MELON-HEADED | <i>Peponocephala electra</i> |
| WHALE, MINKE | <i>Balaenoptera acutorostrata</i> |
| WHALE, NK | Cetacea |
| WHALE, NORTHERN BOTTLENOSE | <i>Hyperoodon ampullatus</i> |
| WHALE, PILOT, LONG-FIN | <i>Globicephala melas</i> |
| WHALE, PILOT, NK | <i>Globicephala</i> sp |
| WHALE, PILOT, SHORT-FIN | <i>Globicephala macrorhynchus</i> |

| | |
|---------------------------------|----------------------------------|
| WHALE, PYGMY KILLER | <i>Feresa attenuata</i> |
| WHALE, PYGMY SPERM | <i>Kogia breviceps</i> |
| WHALE, RIGHT, NORTHERN | <i>Balaena glacialis</i> |
| WHALE, SEI | <i>Balaenoptera borealis</i> |
| WHALE, SPERM | <i>Physeter macrocephalus</i> |
| WHALE, TOOTHED, NK | Odontoceti |
| WHELK, CHANNELED (Smooth) | <i>Busycon canaliculatum</i> |
| WHELK, KNOBBED | <i>Busycon carica</i> |
| WHELK, LIGHTNING | <i>Busycon contrarium</i> |
| WHELK, NK, CONCH | Melongenidae |
| WHITING, BLACK (Hake, offshore) | <i>Merluccius albidus</i> |
| WOLFFISH, ATLANTIC | <i>Anarhichas lupus</i> |
| WOLFFISH, NORTHERN | <i>Anarhichas denticulatus</i> |
| WORM, BLOOD | <i>Glycera</i> sp |
| WORM, NK | Annelida |
| WRECKFISH | <i>Polyprion americanus</i> |
| WRYMOUTH | <i>Cryptacanthodes maculatus</i> |

Appendix B. Fish Disposition Codes

Used on all Haul Logs and the Individual Animal Log.

MARKET

- 001 = No market, reason not specified.
- 002 = No market, too small.
- 003 = No market, too large.
- 004 = No market, quota filled.
- 005 = No market, won't keep until trip end.
- 006 = No market, but retained by vessel for alternate program.
- 007 = No market, but retained by observer for science purposes.

REGULATIONS

- 011 = Regulations prohibit retention, reason not specified.
- 012 = Regulations prohibit retention, too small.
- 013 = Regulations prohibit retention, too large.
- 014 = Regulations prohibit retention, quota filled.
- 015 = Regulations prohibit retention, no quota in area.
- 022 = Regulations prohibit retention, v-notched.
- 023 = Regulations prohibit retention, soft-shelled.
- 024 = Regulations prohibit retention, with eggs.
- 025 = Regulations prohibit any retention (including no permit).

QUALITY

- 031 = Poor quality, reason not specified.
- 032 = Poor quality, due to sandflea damage.
- 033 = Poor quality, due to seal damage.
- 034 = Poor quality, due to shark damage.
- 035 = Poor quality, due to cetacean damage.
- 036 = Poor quality, due to hagfish damage.
- 037 = Poor quality, due to shell disease.
- 038 = Poor quality, due to gear damage.
- 039 = Poor quality, previously discarded fish.

NOT BROUGHT ONBOARD

- 041 = Not brought onboard, reason not specified.
- 042 = Not brought onboard, gear damage prevented capture.
- 043 = Not brought onboard, fell out/off of gear.
- 044 = Not brought onboard, considered to have no market value.
- 048 = Not brought onboard, vessel capacity filled.
- 049 = Not brought onboard, not enough fish to pump aboard.

MARINE MAMMAL/DEBRIS

- 053 = Debris.
- 054 = Empty shells.

UPGRADING/MARKET DRIVEN SELECTIVITY

- 062 = Upgraded.
- 063 = Vessel retaining only certain size for best price due to trip quota in effect.

KEPT

- 100 = Kept.
- 110 = Kept, transfered to another vessel.
- 170 = Kept, used for bait.
- 171 = Kept, consumed by captain/crew.

GENERAL

- 000 = Discarded, reason unknown.
- 099 = Discarded other, record the discard reason in COMMENTS.
- 900 = Unknown.

Appendix C. Port Codes- Sorted by State Name, Port Name

| | | | |
|--------|-------------------|----|---------------|
| 050913 | LOS ANGELES | CA | LOS ANGELES |
| 960999 | CANADA | CN | CANADA |
| 076209 | BRANFORD | CT | NEW HAVEN |
| 078201 | BRIDGEPORT | CT | FAIRFIELD |
| 073607 | CHESTER | CT | MIDDLESEX |
| 074107 | CLINTON | CT | MIDDLESEX |
| 071001 | COS COB | CT | FAIRFIELD |
| 073307 | CROMWELL | CT | MIDDLESEX |
| 078601 | DARIEN | CT | FAIRFIELD |
| 073707 | DEEP RIVER | CT | MIDDLESEX |
| 077009 | DERBY | CT | NEW HAVEN |
| 073007 | EAST HADDAM | CT | MIDDLESEX |
| 074207 | EAST HAMPTON | CT | MIDDLESEX |
| 076309 | EAST HAVEN | CT | NEW HAVEN |
| 071911 | EAST LYME | CT | NEW LONDON |
| 073807 | ESSEX | CT | MIDDLESEX |
| 078301 | FAIRFIELD | CT | FAIRFIELD |
| 075003 | GLASTONBURY | CT | HARTFORD |
| 078801 | GREENWICH | CT | FAIRFIELD |
| 071211 | GROTON | CT | NEW LONDON |
| 076109 | GUILFORD | CT | NEW HAVEN |
| 073507 | HADDAM | CT | MIDDLESEX |
| 075203 | HARTFORD | CT | HARTFORD |
| 072111 | LYME | CT | NEW LONDON |
| 076009 | MADISON | CT | NEW HAVEN |
| 073407 | MIDDLETOWN | CT | MIDDLESEX |
| 076809 | MILFORD | CT | NEW HAVEN |
| 071611 | MONTVILLE | CT | NEW LONDON |
| 072211 | MYSTIC | CT | NEW LONDON |
| 076409 | NEW HAVEN | CT | NEW HAVEN |
| 071811 | NEW LONDON | CT | NEW LONDON |
| 072311 | NIANTIC | CT | NEW LONDON |
| 071111 | NOANK | CT | NEW LONDON |
| 078501 | NORWALK | CT | FAIRFIELD |
| 071511 | NORWICH | CT | NEW LONDON |
| 072011 | OLD LYME | CT | NEW LONDON |
| 073907 | OLD SAYBROOK | CT | MIDDLESEX |
| 070999 | OTHER CONNECTICUT | CT | NOT-SPECIFIED |
| 070901 | OTHER FAIRFIELD | CT | FAIRFIELD |
| 070903 | OTHER HARTFORD | CT | HARTFORD |
| 070907 | OTHER MIDDLESEX | CT | MIDDLESEX |
| 070909 | OTHER NEW HAVEN | CT | NEW HAVEN |
| 070911 | OTHER NEW LONDON | CT | NEW LONDON |
| 073207 | PORTLAND | CT | MIDDLESEX |
| 075403 | ROCKY HILL | CT | HARTFORD |
| 078701 | STAMFORD | CT | FAIRFIELD |

| | | | |
|--------|---------------------------|----|---------------------|
| 071011 | STONINGTON | CT | NEW LONDON |
| 078101 | STRATFORD | CT | FAIRFIELD |
| 071711 | WATERFORD | CT | NEW LONDON |
| 076709 | WEST HAVEN | CT | NEW HAVEN |
| 074007 | WESTBROOK | CT | MIDDLESEX |
| 078401 | WESTPORT | CT | FAIRFIELD |
| 075303 | WHETHERSFIELD | CT | HARTFORD |
| 075503 | WINDSOR LOCKS | CT | HARTFORD |
| 090999 | WASHINGTON | DC | CITY OF WASHINGTON |
| 080401 | BOWERS BEACH | DE | KENT |
| 080305 | INDIAN RIVER | DE | SUSSEX |
| 080205 | LEWES | DE | SUSSEX |
| 080501 | MISPILLION | DE | KENT |
| 080999 | OTHER DELAWARE | DE | NOT-SPECIFIED |
| 080901 | OTHER KENT | DE | KENT |
| 080903 | OTHER NEW CASTLE | DE | NEW CASTLE |
| 080905 | OTHER SUSSEX | DE | SUSSEX |
| 080105 | PORT MAHON | DE | SUSSEX |
| 100905 | GREEN COVE | FL | CLAY |
| 110901 | OTHER BAY | FL | BAY |
| 100901 | OTHER BREVARD | FL | BREVARD |
| 100903 | OTHER BROWARD | FL | BROWARD |
| 110903 | OTHER CHARLOTTE | FL | CHARLOTTE |
| 110905 | OTHER CITRUS | FL | CITRUS |
| 110907 | OTHER COLLIER | FL | COLLIER |
| 100907 | OTHER DADE | FL | DADE |
| 110909 | OTHER DIXIE | FL | DIXIE |
| 100908 | OTHER DUVAL | FL | DUVAL |
| 110911 | OTHER ESCAMBIA | FL | ESCAMBIA |
| 110992 | OTHER ESCAMBIA/SANTA ROSA | FL | ESCAMBIA/SANTA ROSA |
| 100909 | OTHER FLAGLER | FL | FLAGLER |
| 110913 | OTHER FRANKLIN | FL | FRANKLIN |
| 110914 | OTHER GADSDEN | FL | GADSDEN |
| 100911 | OTHER GLADES | FL | GLADES |
| 110915 | OTHER GULF | FL | GULF |
| 100913 | OTHER HENRY | FL | HENRY |
| 110917 | OTHER HERNANDO | FL | HERNANDO |
| 110994 | OTHER HERNANDO/PASCO | FL | HERNANDO/PASCO |
| 110919 | OTHER HILLSBOROUGH | FL | HILLSBOROUGH |
| 100915 | OTHER INDIAN RIVER | FL | INDIAN RIVER |
| 110921 | OTHER JEFFERSON | FL | JEFFERSON |
| 100916 | OTHER LAKE | FL | LAKE |
| 100991 | OTHER LAKE (INLAND) | FL | LAKE |
| 110923 | OTHER LEE | FL | LEE |
| 110925 | OTHER LEVY | FL | LEVY |
| 110927 | OTHER MANATEE | FL | MANATEE |
| 100917 | OTHER MARION | FL | MARION |
| 100919 | OTHER MARTIN | FL | MARTIN |
| 110929 | OTHER MONORE | FL | MONORE |

| | | | |
|--------|------------------------|----|-----------------|
| 100921 | OTHER NASSAU | FL | NASSAU |
| 100993 | OTHER OCEOLA (INLAND) | FL | OCEOLA |
| 110931 | OTHER OKALOOSA | FL | OKALOOSA |
| 110993 | OTHER OKALOOSA/WALTON | FL | OKALOOSA/WALTON |
| 100922 | OTHER OKEECHOBEE | FL | OKEECHOBEE |
| 100923 | OTHER PALM BEACH | FL | PALM BEACH |
| 110933 | OTHER PASCO | FL | PASCO |
| 110935 | OTHER PINELLAS | FL | PINELLAS |
| 100924 | OTHER POLK | FL | POLK |
| 100925 | OTHER PUTHAM | FL | PUTHAM |
| 110937 | OTHER SANTA ROSA | FL | SANTA ROSA |
| 110939 | OTHER SARASOTA | FL | SARASOTA |
| 100927 | OTHER ST JOHNS | FL | ST JOHNS |
| 100929 | OTHER ST LUCIE | FL | ST LUCIE |
| 110941 | OTHER TAYLOR | FL | TAYLOR |
| 100933 | OTHER VOLUSIA | FL | VOLUSIA |
| 110943 | OTHER WAKULLA | FL | WAKULLA |
| 110945 | OTHER WALTON | FL | WALTON |
| 970999 | DOMESTIC JOINT VENTURE | JV | |
| 980999 | FOREIGN JOINT VENTURE | JV | |
| 240307 | AMESBURY | MA | ESSEX |
| 240407 | BEVERLY | MA | ESSEX |
| 241407 | BEVERLY/SALEM | MA | ESSEX |
| 240115 | BOSTON | MA | SUFFOLK |
| 240301 | CHATHAM | MA | BARNSTABLE |
| 240105 | CHILMARK | MA | DUKES |
| 242511 | COHASSET | MA | NORFOLK |
| 241401 | COTUIT | MA | BARNSTABLE |
| 242405 | CUTTYHUNK | MA | DUKES |
| 240507 | DANVERS | MA | ESSEX |
| 241803 | DARTMOUTH | MA | BRISTOL |
| 240101 | DENNIS | MA | BARNSTABLE |
| 242713 | DUXBURY | MA | PLYMOUTH |
| 241701 | EASTHAM | MA | BARNSTABLE |
| 240205 | EDGARTOWN | MA | DUKES |
| 243007 | ESSEX | MA | ESSEX |
| 242203 | FAIRHAVEN | MA | BRISTOL |
| 240903 | FALL RIVER | MA | BRISTOL |
| 241001 | FALMOUTH | MA | BARNSTABLE |
| 240103 | FREETOWN | MA | BRISTOL |
| 240207 | GLOUCESTER | MA | ESSEX |
| 242901 | HARWICHPORT | MA | BARNSTABLE |
| 240111 | HINGHAM | MA | NORFOLK |
| 244013 | HULL | MA | PLYMOUTH |
| 241507 | IPSWICH | MA | ESSEX |
| 241607 | LYNN | MA | ESSEX |
| 240607 | MANCHESTER | MA | ESSEX |
| 243107 | MARBLEHEAD | MA | ESSEX |
| 240113 | MARION | MA | PLYMOUTH |

| | | | |
|--------|--------------------|----|-----------------|
| 240213 | MARSHFIELD | MA | PLYMOUTH |
| 240313 | MATTAPOISETT | MA | PLYMOUTH |
| 243207 | NAHANT | MA | ESSEX |
| 240909 | NANTUCKET | MA | NANTUCKET |
| 241501 | NAUSET | MA | BARNSTABLE |
| 240403 | NEW BEDFORD | MA | BRISTOL |
| 240707 | NEWBURY | MA | ESSEX |
| 241907 | NEWBURYPORT | MA | ESSEX |
| 240305 | OAK BLUFFS | MA | DUKES |
| 243913 | ONSET | MA | PLYMOUTH |
| 241601 | ORLEANS | MA | BARNSTABLE |
| 240901 | OTHER BARNSTABLE | MA | BARNSTABLE |
| 240905 | OTHER DUKES | MA | DUKES |
| 240907 | OTHER ESSEX | MA | ESSEX |
| 240999 | OTHER MASS | MA | NOT-SPECIFIED |
| 240911 | OTHER NORFOLK | MA | NORFOLK |
| 240913 | OTHER PLYMOUTH | MA | PLYMOUTH |
| 240915 | OTHER SUFFOLK | MA | SUFFOLK |
| 240513 | PLYMOUTH | MA | PLYMOUTH |
| 240601 | PROVINCETOWN | MA | BARNSTABLE |
| 240211 | QUINCY | MA | NORFOLK |
| 240415 | REVERE | MA | SUFFOLK |
| 241707 | ROCKPORT | MA | ESSEX |
| 240807 | SALEM | MA | ESSEX |
| 241007 | SALISBURY | MA | ESSEX |
| 240701 | SANDWICH | MA | BARNSTABLE |
| 241107 | SAUGUS | MA | ESSEX |
| 240813 | SCITUATE | MA | PLYMOUTH |
| 241207 | SWAMPSCOTT | MA | ESSEX |
| 240405 | TISBURY | MA | DUKES |
| 241201 | TOWN OF BARNSTABLE | MA | BARNSTABLE |
| 241101 | WELLFLEET | MA | BARNSTABLE |
| 241903 | WESTPORT | MA | BRISTOL |
| 240215 | WEYMOUTH | MA | SUFFOLK |
| 240315 | WINTHROP | MA | SUFFOLK |
| 241901 | WOODS HOLE | MA | BARNSTABLE |
| 241301 | YARMOUTH | MA | BARNSTABLE |
| 233011 | AQUALAND | MD | CHARLES |
| 235123 | BLAKE CREEK | MD | ST. MARY'S |
| 236023 | BRETON BAY | MD | ST. MARY'S |
| 233019 | BROAD CREEK | MD | PRINCE GEORGE'S |
| 237223 | CANOE NECK CREEK | MD | ST. MARY'S |
| 233223 | CARTHEGENA CREEK | MD | ST. MARY'S |
| 237011 | CHICAMUXEN CREEK | MD | CHARLES |
| 236123 | COMBS CREEK | MD | ST. MARY'S |
| 233323 | COOPER CREEK | MD | ST. MARY'S |
| 231511 | CUCKOLDS CREEK | MD | CHARLES |
| 237523 | DUKEHART CREEK | MD | ST. MARY'S |
| 235323 | FLOOD CREEK | MD | ST. MARY'S |

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|--------|-----------------------|----|-----------------|
| 234111 | GOOSE BAY | MD | CHARLES |
| 235023 | HERRING CREEK | MD | ST. MARY'S |
| 234123 | ISLAND CREEK | MD | ST. MARY'S |
| 231023 | LAKE CONOY | MD | ST. MARY'S |
| 236011 | MALLOWS BAY | MD | CHARLES |
| 238511 | MARSHALL HALL | MD | CHARLES |
| 237511 | MATTAWOMAN CREEK | MD | CHARLES |
| 232511 | MORGANTOWN | MD | CHARLES |
| 234511 | NANJEMOY CREEK | MD | CHARLES |
| 231011 | NEALE SOUND | MD | CHARLES |
| 230131 | OCEAN CITY | MD | WORCESTER |
| 230911 | OTHER CHARLES COUNTY | MD | CHARLES |
| 230999 | OTHER MARYLAND | MD | NOT-SPECIFIED |
| 230919 | OTHER PRINCE GEORGE'S | MD | PRINCE GEORGE'S |
| 230925 | OTHER SOMERSET | MD | SOMERSET |
| 230923 | OTHER ST. MARY'S | MD | ST. MARY'S |
| 230931 | OTHER WORCESTER | MD | WORCESTER |
| 234019 | OXON COVE | MD | PRINCE GEORGE'S |
| 232011 | PICCOWAXEN CREEK | MD | CHARLES |
| 234223 | PINEY POINT | MD | ST. MARY'S |
| 231019 | PISCATAWAY CREEK | MD | PRINCE GEORGE'S |
| 238011 | POMONKEY CREEK | MD | CHARLES |
| 233511 | POPES CREEK | MD | CHARLES |
| 235223 | POPLAR HILL CREEK | MD | ST. MARY'S |
| 234011 | PORT TOBBACO | MD | CHARLES |
| 231111 | POTOMAC VIEW | MD | CHARLES |
| 235011 | RIVERSIDE | MD | CHARLES |
| 236511 | SANDY POINT (MD) | MD | CHARLES |
| 232023 | SMITH CREEK | MD | ST. MARY'S |
| 235511 | SMITH POINT (MD) | MD | CHARLES |
| 238023 | ST. CATHERINE SOUND | MD | ST. MARY'S |
| 237023 | ST. CLEMENTS BAY | MD | ST. MARY'S |
| 234023 | ST. GEORGES CREEK | MD | ST. MARY'S |
| 233123 | ST. INIGOES CREEK | MD | ST. MARY'S |
| 233023 | ST. MARY'S RIVER | MD | ST. MARY'S |
| 237123 | ST. PATRICK'S CREEK | MD | ST. MARY'S |
| 232019 | SWANN CREEK | MD | PRINCE GEORGE'S |
| 232111 | WAVERLY CREEK | MD | CHARLES |
| 238123 | WHITE NECK CREEK | MD | ST. MARY'S |
| 235423 | WHITE POINT BEACH | MD | ST. MARY'S |
| 230511 | WICOMICO RIVER (C) | MD | CHARLES |
| 239023 | WICOMICO RIVER (S.M.) | MD | ST. MARY'S |
| 226619 | ADDISON | ME | WASHINGTON |
| 225615 | ARROWSIC | ME | SAGAHADOC |
| 220301 | BAILEY ISLAND | ME | CUMBERLAND |
| 222403 | BAR HARBOR | ME | HANCOCK |
| 225715 | BATH | ME | SAGAHADOC |
| 225815 | BAY POINT | ME | SAGAHADOC |
| 225619 | BEALS ISLAND | ME | WASHINGTON |

| | | | |
|--------|-------------------|----|------------|
| 221207 | BELFAST | ME | KNOX |
| 222603 | BERNARD | ME | HANCOCK |
| 226620 | BIDDEFORD POOL | ME | YORK |
| 225003 | BIRCH HARBOR | ME | HANCOCK |
| 225103 | BLUE HILL | ME | HANCOCK |
| 224109 | BOOTHBAY HARBOR | ME | LINCOLN |
| 224209 | BREMEN | ME | LINCOLN |
| 225009 | BRISTOL | ME | LINCOLN |
| 224203 | BROOKLIN | ME | HANCOCK |
| 225203 | BROOKSVILLE | ME | HANCOCK |
| 222001 | BRUNSWICK | ME | CUMBERLAND |
| 225719 | BUCKS HARBOR | ME | WASHINGTON |
| 222703 | BUNKERS HARBOR | ME | HANCOCK |
| 222407 | CAMDEN | ME | KNOX |
| 226720 | CAMP ELLIS | ME | YORK |
| 222101 | CAPE ELIZABETH | ME | CUMBERLAND |
| 226820 | CAPE PORPOISE | ME | YORK |
| 224403 | CAPE ROSIER | ME | HANCOCK |
| 220401 | CHEBEAGUE ISLAND | ME | CUMBERLAND |
| 222803 | COREA | ME | HANCOCK |
| 221201 | CUMBERLAND | ME | CUMBERLAND |
| 220501 | CUNDYS HARBOR | ME | CUMBERLAND |
| 221307 | CUSHING | ME | KNOX |
| 225819 | CUTLER | ME | WASHINGTON |
| 225919 | DYERS BAY | ME | WASHINGTON |
| 224309 | EAST BOOTHBAY | ME | LINCOLN |
| 220601 | EAST HARPSWELL | ME | CUMBERLAND |
| 226719 | EASTERN HARBOR | ME | WASHINGTON |
| 226819 | EASTPORT | ME | WASHINGTON |
| 227320 | ELIOT | ME | YORK |
| 221901 | FALMOUTH | ME | CUMBERLAND |
| 225015 | FIVE ISLANDS | ME | SAGAHADOC |
| 220701 | FREEPORT | ME | CUMBERLAND |
| 222903 | FRENCHBORO | ME | HANCOCK |
| 221407 | FRIENDSHIP | ME | KNOX |
| 221507 | FRIENDSHIP HARBOR | ME | KNOX |
| 225915 | GEORGETOWN | ME | SAGAHADOC |
| 221301 | HARPSWELL | ME | CUMBERLAND |
| 226919 | HARRINGTON | ME | WASHINGTON |
| 225115 | HERMIT ISLAND | ME | SAGAHADOC |
| 222507 | ISLE AU HAUT | ME | KNOX |
| 221017 | ISLEBORO | ME | WALDO |
| 223003 | ISLESFORD | ME | HANCOCK |
| 226019 | JONESPORT | ME | WASHINGTON |
| 226920 | KENNEBUNKPORT | ME | YORK |
| 227020 | KITTERY | ME | YORK |
| 221401 | LONG ISLAND | ME | CUMBERLAND |
| 227019 | LUBEC | ME | WASHINGTON |
| 227119 | MACHIAS | ME | WASHINGTON |

| | | | |
|--------|------------------|----|---------------|
| 221607 | MATINICUS | ME | KNOX |
| 223103 | MCKINLEY | ME | HANCOCK |
| 224409 | MEDOMAK | ME | LINCOLN |
| 226119 | MILBRIDGE | ME | WASHINGTON |
| 225109 | MONHEGAN | ME | LINCOLN |
| 224509 | NEW HARBOR | ME | LINCOLN |
| 221707 | NORTH HAVEN | ME | KNOX |
| 224503 | NORTHEAST HARBOR | ME | HANCOCK |
| 224603 | NORTHWEST HARBOR | ME | HANCOCK |
| 227420 | OGUNQUIT | ME | YORK |
| 221501 | ORRS ISLAND | ME | CUMBERLAND |
| 220901 | OTHER CUMBERLAND | ME | CUMBERLAND |
| 220903 | OTHER HANCOCK | ME | HANCOCK |
| 220905 | OTHER KENNEBEC | ME | KENNEBEC |
| 220907 | OTHER KNOX | ME | KNOX |
| 220909 | OTHER LINCOLN | ME | LINCOLN |
| 220999 | OTHER MAINE | ME | NOT-SPECIFIED |
| 220911 | OTHER OXFORD | ME | OXFORD |
| 220913 | OTHER PENOBSCOT | ME | PENOBSCOT |
| 220915 | OTHER SAGAHADOC | ME | SAGAHADOC |
| 220917 | OTHER WALDO | ME | WALDO |
| 220919 | OTHER WASHINGTON | ME | WASHINGTON |
| 220920 | OTHER YORK | ME | YORK |
| 221807 | OWLS HEAD | ME | KNOX |
| 224609 | PEMAQUID | ME | LINCOLN |
| 221601 | PERKINS COVE | ME | CUMBERLAND |
| 225215 | PHIPPSBURG | ME | SAGAHADOC |
| 226219 | PIGEON HILL | ME | WASHINGTON |
| 220801 | PINE POINT | ME | CUMBERLAND |
| 226015 | POPHAM | ME | SAGAHADOC |
| 221907 | PORT CLYDE | ME | KNOX |
| 220101 | PORTLAND | ME | CUMBERLAND |
| 223203 | PROSPECT HARBOR | ME | HANCOCK |
| 220207 | ROCKLAND | ME | KNOX |
| 226319 | ROGUE BLUFFS | ME | WASHINGTON |
| 224709 | ROUND POND | ME | LINCOLN |
| 227520 | SACO | ME | YORK |
| 224703 | SALISBURY COVE | ME | HANCOCK |
| 221701 | SCARBOROUGH | ME | CUMBERLAND |
| 224803 | SEAL HARBOR | ME | HANCOCK |
| 221117 | SEARSPORT | ME | WALDO |
| 225315 | SEBASCO ESTATES | ME | SAGAHADOC |
| 225415 | SMALL POINT | ME | SAGAHADOC |
| 223303 | SORRENTO | ME | HANCOCK |
| 226419 | SOUTH ADDISON | ME | WASHINGTON |
| 224809 | SOUTH BRISTOL | ME | LINCOLN |
| 221801 | SOUTH FREPORT | ME | CUMBERLAND |
| 224903 | SOUTH GOULDSBORO | ME | HANCOCK |
| 221001 | SOUTH HARPSWELL | ME | CUMBERLAND |

| | | | |
|--------|--------------------|----|------------|
| 224909 | SOUTHPORT | ME | LINCOLN |
| 223403 | SOUTHWEST HARBOR | ME | HANCOCK |
| 222007 | SPRUCEHEAD | ME | KNOX |
| 222107 | ST. GEORGE | ME | KNOX |
| 223503 | STONINGTON | ME | HANCOCK |
| 227319 | STUEBEN | ME | WASHINGTON |
| 223603 | SUNSHINE/DEER ISLE | ME | HANCOCK |
| 223803 | SWANS ISLAND | ME | HANCOCK |
| 222207 | TENANTS HARBOR | ME | KNOX |
| 222503 | TREMONT | ME | HANCOCK |
| 222307 | VINALHAVEN | ME | KNOX |
| 227620 | WELLS | ME | YORK |
| 223903 | WEST GOULDSBORO | ME | HANCOCK |
| 226519 | WEST JONESPORT | ME | WASHINGTON |
| 225515 | WEST POINT | ME | SAGAHADOC |
| 225209 | WESTPORT | ME | LINCOLN |
| 224003 | WINTER HARBOR | ME | HANCOCK |
| 225309 | WISCASSET | ME | LINCOLN |
| 221101 | YARMOUTH | ME | CUMBERLAND |
| 227120 | YORK | ME | YORK |
| 227220 | YORK HARBOR | ME | YORK |
| 360109 | ATLANTIC | NC | CARTERET |
| 360119 | AVON | NC | DARE |
| 360137 | BAYBORO | NC | PAMLICO |
| 360209 | BEAUFORT | NC | CARTERET |
| 361001 | BELHAVEN | NC | BEAUFORT |
| 360127 | ENGELHARD | NC | HYDE |
| 360319 | HATTERAS | NC | DARE |
| 360237 | HOBUCKEN | NC | PAMLICO |
| 361005 | HOLDEN BEACH | NC | BRUNSWICK |
| 360337 | LOWLAND | NC | PAMLICO |
| 361119 | MANTEO | NC | DARE |
| 360309 | MOREHEAD CITY | NC | CARTERET |
| 360227 | OCRACOKE | NC | HYDE |
| 360419 | OREGON INLET | NC | DARE |
| 360437 | ORIENTAL | NC | PAMLICO |
| 360901 | OTHER BEAUFORT | NC | BEAUFORT |
| 360903 | OTHER BERTIE | NC | BERTIE |
| 360905 | OTHER BRUNSWICK | NC | BRUNSWICK |
| 360907 | OTHER CAMDEN | NC | CAMDEN |
| 360909 | OTHER CARTERET | NC | CARTERET |
| 360911 | OTHER CHOWAN | NC | CHOWAN |
| 360913 | OTHER CRAVEN | NC | CRAVEN |
| 360915 | OTHER CUMBERLAND | NC | CUMBERLAND |
| 360917 | OTHER CURRITUCK | NC | CURRITUCK |
| 360919 | OTHER DARE | NC | DARE |
| 360921 | OTHER GATES | NC | GATES |
| 360923 | OTHER HALIFAX | NC | HALIFAX |
| 360925 | OTHER HERTFORD | NC | HERTFORD |

| | | | |
|--------|---------------------------|----|---------------|
| 360927 | OTHER HYDE | NC | HYDE |
| 360929 | OTHER LENOIR | NC | LENOIR |
| 360931 | OTHER MARTIN | NC | MARTIN |
| 360933 | OTHER NEW HANOVER | NC | NEW HANOVER |
| 360999 | OTHER NORTH CAROLINA | NC | NOT-SPECIFIED |
| 360935 | OTHER ONSLOW | NC | ONSLOW |
| 360937 | OTHER PAMLICO | NC | PAMLICO |
| 360939 | OTHER PASQUOTANK | NC | PASQUOTANK |
| 360941 | OTHER PENDER | NC | PENDER |
| 360943 | OTHER PERQUIMANS | NC | PERQUIMANS |
| 360945 | OTHER PITT | NC | PITT |
| 360947 | OTHER TYRRELL | NC | TYRRELL |
| 360949 | OTHER WASHINGTON | NC | WASHINGTON |
| 360951 | OTHER WAYNE | NC | WAYNE |
| 361037 | PAMLICO | NC | PAMLICO |
| 360409 | SALTER PATH | NC | CARTERET |
| 361035 | SNEADS FERRY | NC | ONSLOW |
| 361027 | SWAN QUARTER | NC | HYDE |
| 360135 | SWANSBORO | NC | ONSLOW |
| 360537 | VANDEMERE | NC | PAMLICO |
| 360219 | WANCHESE | NC | DARE |
| 320102 | DURHAM | NH | STRAFFORD |
| 320501 | GREAT BAY | NH | ROCKINGHAM |
| 320801 | HAMPTON | NH | ROCKINGHAM |
| 320301 | HAMPTON/SEABROOK | NH | ROCKINGHAM |
| 320601 | NEW CASTLE | NH | ROCKINGHAM |
| 320101 | NEW HAMPSHIRE | NH | ROCKINGHAM |
| 320701 | NEWINGTON | NH | ROCKINGHAM |
| 320201 | PORTSMOUTH | NH | ROCKINGHAM |
| 320401 | RYE | NH | ROCKINGHAM |
| 320901 | SEABROOK | NH | ROCKINGHAM |
| 330201 | ATLANTIC CITY | NJ | ATLANTIC |
| 331009 | AVALON | NJ | CAPE MAY |
| 330227 | BARNEGAT | NJ | OCEAN |
| 330327 | BAYVILLE | NJ | OCEAN |
| 331125 | BELFORD | NJ | MONMOUTH |
| 331325 | BELMAR | NJ | MONMOUTH |
| 331011 | BIVALVE | NJ | CUMBERLAND |
| 330427 | BRICK | NJ | OCEAN |
| 331525 | BRIELLE | NJ | MONMOUTH |
| 331909 | BURLEIGH | NJ | CAPE MAY |
| 330309 | CAPE MAY | NJ | CAPE MAY |
| 331033 | ELIZABETH | NJ | UNION |
| 330527 | FORKED RIVER | NJ | OCEAN |
| 331225 | HIGHLANDS | NJ | MONMOUTH |
| 331017 | JERSEY CITY | NJ | HUDSON |
| 330125 | KEYPORT | NJ | MONMOUTH |
| 331001 | LEEDS POINT | NJ | ATLANTIC |
| 331627 | LONG BEACH/BARNEGAT LIGHT | NJ | OCEAN |

| | | | |
|--------|------------------|----|---------------|
| 330225 | MANASQUAN | NJ | MONMOUTH |
| 330627 | MANTALOKING | NJ | OCEAN |
| 330325 | MIDDLETOWN | NJ | MONMOUTH |
| 330425 | MONMOUTH | NJ | MONMOUTH |
| 330727 | MYSTIC ISLANDS | NJ | OCEAN |
| 331425 | NEPTUNE | NJ | MONMOUTH |
| 331101 | NORTHFIELD | NJ | ATLANTIC |
| 331109 | OCEAN CITY | NJ | CAPE MAY |
| 331023 | OLD BRIDGE | NJ | MIDDLESEX |
| 330901 | OTHER ATLANTIC | NJ | ATLANTIC |
| 330903 | OTHER BERGEN | NJ | BERGEN |
| 330905 | OTHER BURLINGTON | NJ | BURLINGTON |
| 330907 | OTHER CAMDEN | NJ | CAMDEN |
| 330909 | OTHER CAPE MAY | NJ | CAPE MAY |
| 330911 | OTHER CUMBERLAND | NJ | CUMBERLAND |
| 330913 | OTHER ESSEX | NJ | ESSEX |
| 330915 | OTHER GLOUCESTER | NJ | GLOUCESTER |
| 330917 | OTHER HUDSON | NJ | HUDSON |
| 330919 | OTHER HUNTERDON | NJ | HUNTERDON |
| 330921 | OTHER MERCER | NJ | MERCER |
| 330923 | OTHER MIDDLESEX | NJ | MIDDLESEX |
| 330925 | OTHER MONMOUTH | NJ | MONMOUTH |
| 330999 | OTHER NJ | NJ | NOT-SPECIFIED |
| 330927 | OTHER OCEAN | NJ | OCEAN |
| 330929 | OTHER PASSAIC | NJ | PASSAIC |
| 330931 | OTHER SALEM | NJ | SALEM |
| 330933 | OTHER UNION | NJ | UNION |
| 330827 | PINE BEACH | NJ | OCEAN |
| 331711 | PORT NORRIS | NJ | CUMBERLAND |
| 331201 | PORT REPUBLIC | NJ | ATLANTIC |
| 330127 | PT. PLEASANT | NJ | OCEAN |
| 330525 | RED BANK | NJ | MONMOUTH |
| 331209 | REEDS BEACH | NJ | CAPE MAY |
| 331309 | RUMSON | NJ | CAPE MAY |
| 330625 | SEA BRIGHT | NJ | MONMOUTH |
| 330509 | SEA ISLE CITY | NJ | CAPE MAY |
| 330725 | SHARK RIVER | NJ | MONMOUTH |
| 331409 | STONE HARBOR | NJ | CAPE MAY |
| 331027 | TOMS RIVER | NJ | OCEAN |
| 331227 | TUCKERTON | NJ | OCEAN |
| 331811 | VINELAND | NJ | CUMBERLAND |
| 331127 | WARETOWN | NJ | OCEAN |
| 330409 | WILDWOOD | NJ | CAPE MAY |
| 331123 | WOODBIDGE | NJ | MIDDLESEX |
| 350835 | AMMAGANSETT | NY | SUFFOLK |
| 350211 | BROOKLYN | NY | KINGS |
| 350315 | FREEPORT | NY | NASSAU |
| 350535 | GREENPORT | NY | SUFFOLK |
| 350735 | HAMPTON BAY | NY | SUFFOLK |

| | | | |
|--------|-------------------|----|--------------------|
| 350435 | ISLIP | NY | SUFFOLK |
| 351035 | MATTITUCK | NY | SUFFOLK |
| 350635 | MONTAUK | NY | SUFFOLK |
| 350117 | NEW YORK CITY | NY | NEW YORK |
| 350903 | OTHER BRONX | NY | BRONX |
| 350905 | OTHER COLUMBIA | NY | COLUMBIA |
| 350907 | OTHER DUCHESS | NY | DUCHESS |
| 350909 | OTHER GREENE | NY | GREENE |
| 350911 | OTHER KINGS | NY | KINGS |
| 350915 | OTHER NASSAU | NY | NASSAU |
| 350999 | OTHER NY | NY | NOT-SPECIFIED |
| 350923 | OTHER QUEENS | NY | QUEENS |
| 350927 | OTHER RICHMOND | NY | RICHMOND |
| 350929 | OTHER ROCKLAND | NY | ROCKLAND |
| 350935 | OTHER SUFFOLK | NY | SUFFOLK |
| 350937 | OTHER ULSTER | NY | ULSTER |
| 350939 | OTHER WESTCHESTER | NY | WESTCHESTER |
| 351215 | POINT LOOKOUT | NY | NASSAU |
| 351135 | SHINNECOCK | NY | SUFFOLK |
| 410107 | CHESTER | PA | DELAWARE |
| 410117 | PHILADELPHIA | PA | PHILADELPHIA |
| 421001 | BARINGTON | RI | BRISTOL |
| 420601 | BRISTOL | RI | BRISTOL |
| 421209 | CHARLESTOWN | RI | WASHINGTON |
| 421605 | JAMESTOWN | RI | NEWPORT |
| 421805 | LITTLE COMPTON | RI | NEWPORT |
| 420705 | MELVILLE | RI | NEWPORT |
| 421705 | MIDDLETOWN | RI | NEWPORT |
| 421309 | NEW SHOREHAM | RI | WASHINGTON |
| 420105 | NEWPORT | RI | NEWPORT |
| 421509 | NORTH KINGSTOWN | RI | WASHINGTON |
| 420901 | OTHER BRISTOL | RI | BRISTOL |
| 420903 | OTHER KENT | RI | KENT |
| 420905 | OTHER NEWPORT | RI | NEWPORT |
| 420907 | OTHER PROVIDENCE | RI | PROVIDENCE |
| 420999 | OTHER R.I. | RI | NOT-SPECIFIED |
| 420909 | OTHER WASHINGTON | RI | WASHINGTON |
| 420209 | POINT JUDITH | RI | WASHINGTON |
| 420505 | PORTSMOUTH | RI | NEWPORT |
| 421007 | PROVIDENCE | RI | PROVIDENCE |
| 421409 | SOUTH KINGSTOWN | RI | WASHINGTON |
| 420405 | TIVERTON | RI | NEWPORT |
| 420301 | WARREN | RI | BRISTOL |
| 421003 | WARWICK | RI | KENT |
| 421109 | WESTERLEY | RI | WASHINGTON |
| 430913 | GEORGETOWN | SC | GEORGETOWN |
| 490902 | ALEXANDRIA | VA | CITY OF ALEXANDRIA |
| 492061 | AQUIA CREEK | VA | STAFFORD |
| 499201 | ATLANTIC | VA | ACCOMAC |

| | | | |
|--------|-------------------------|----|----------------------|
| 493029 | BARNESFIELD | VA | KING GEORGE |
| 491117 | BELMOUNT BAY | VA | FAIRFAX |
| 498029 | BELVEDERE BEACH | VA | KING GEORGE |
| 492067 | BONUMS CREEK | VA | WESTMORELAND |
| 495167 | BRANSON COVE | VA | WESTMORELAND |
| 495367 | CABIN POINT CREEK | VA | WESTMORELAND |
| 490345 | CAPE CHARLES | VA | NORTHAMPTON |
| 492053 | CHERRY HILL | VA | PRINCE WILLIAM |
| 490701 | CHINCOTEAGUE | VA | ACCOMAC |
| 490869 | CITY OF SEAFORD | VA | YORK |
| 497047 | COAN RIVER | VA | NORTHUMBERLAND |
| 496047 | COD CREEK | VA | NORTHUMBERLAND |
| 493047 | CUBITT CREEK | VA | NORTHUMBERLAND |
| 496167 | CURRIOMAN BAY | VA | WESTMORELAND |
| 493017 | DOUGE CREEK | VA | FAIRFAX |
| 497029 | FAIRVIEW BEACH | VA | KING GEORGE |
| 493167 | GARDNER CREEK | VA | WESTMORELAND |
| 491001 | GREENBACKVILLE | VA | ACCOMAC |
| 492017 | GUNSTON COVE | VA | FAIRFAX |
| 492047 | HACK CREEK | VA | NORTHUMBERLAND |
| 490118 | HAMPTON | VA | CITY OF HAMPTON |
| 498347 | HAMPTON HALL BRANCH | VA | NORTHUMBERLAND |
| 496567 | HORNER BEACH | VA | WESTMORELAND |
| 494047 | HULL CREEK | VA | NORTHUMBERLAND |
| 495017 | HUNTING CREEK | VA | FAIRFAX |
| 493067 | JACKSON CREEK | VA | WESTMORELAND |
| 497347 | KILLNECK CREEK | VA | NORTHUMBERLAND |
| 497147 | KINGSCOTE CREEK | VA | NORTHUMBERLAND |
| 491267 | KINSALE | VA | WESTMORELAND |
| 494017 | LITTLE HUNTING CREEK | VA | FAIRFAX |
| 491047 | LITTLE WICOMICO RIVER | VA | NORTHUMBERLAND |
| 498247 | LODGE CREEK | VA | NORTHUMBERLAND |
| 495067 | LOWER MACHODOC CREEK | VA | WESTMORELAND |
| 499301 | MAPPSVILLE | VA | ACCOMAC |
| 494029 | MATHAIS POINT | VA | KING GEORGE |
| 497067 | MATTOX CREEK | VA | WESTMORELAND |
| 498067 | MONROE BAY | VA | WESTMORELAND |
| 498147 | MUNDY POINT | VA | NORTHUMBERLAND |
| 494053 | NEABSCO CREEK | VA | PRINCE WILLIAM |
| 490910 | NEWPORT NEWS | VA | CITY OF NEWPORT NEWS |
| 496067 | NOMINI BAY | VA | WESTMORELAND |
| 490213 | NORFOLK | VA | CITY OF NORFOLK |
| 491017 | OCCOQUAN BAY (F) | VA | FAIRFAX |
| 495053 | OCCOQUAN BAY (P.W.) | VA | PRINCE WILLIAM |
| 490901 | OTHER ACCOMAC | VA | ACCOMAC |
| 490905 | OTHER CAROLINE | VA | CAROLINE |
| 490907 | OTHER CHARLES CITY | VA | CHARLES CITY |
| 490909 | OTHER CHESTERFIELD | VA | CHESTERFIELD |
| 490903 | OTHER CITY OF ARLINGTON | VA | CITY OF ARLINGTON |

| | | | |
|--------|--------------------------|----|--------------------|
| 490916 | OTHER CITY OF CHESAPEAKE | VA | CITY OF CHESAPEAKE |
| 490918 | OTHER CITY OF HAMPTON | VA | CITY OF HAMPTON |
| 490913 | OTHER CITY OF NORFOLK | VA | CITY OF NORFOLK |
| 490914 | OTHER CITY OF PORTSMOUTH | VA | CITY OF PORTSMOUTH |
| 490912 | OTHER CITY OF RICHMOND | VA | CITY OF RICHMOND |
| 490939 | OTHER CITY OF SUFFOLK | VA | CITY OF SUFFOLK |
| 490911 | OTHER DINWIDDIE | VA | DINWIDDIE |
| 490915 | OTHER ESSEX | VA | ESSEX |
| 490917 | OTHER FAIRFAX | VA | FAIRFAX |
| 490919 | OTHER GLOUCESTER | VA | GLOUCESTER |
| 490920 | OTHER HANOVER | VA | HANOVER |
| 490921 | OTHER HENRICO | VA | HENRICO |
| 490923 | OTHER ISLE OF WIGHT | VA | ISLE OF WIGHT |
| 490925 | OTHER JAMES CITY | VA | JAMES CITY |
| 490927 | OTHER KING & QUEEN | VA | KING & QUEEN |
| 490929 | OTHER KING GEORGE | VA | KING GEORGE |
| 490931 | OTHER KING WILLIAM | VA | KING WILLIAM |
| 490933 | OTHER LANCASTER | VA | LANCASTER |
| 490935 | OTHER MATHEWS | VA | MATHEWS |
| 490937 | OTHER MIDDLESEX | VA | MIDDLESEX |
| 490941 | OTHER NEW KENT | VA | NEW KENT |
| 490945 | OTHER NORTHAMPTON | VA | NORTHAMPTON |
| 490947 | OTHER NORTHUMBERLAND | VA | NORTHUMBERLAND |
| 490949 | OTHER PRINCE GEORGE | VA | PRINCE GEORGE |
| 490953 | OTHER PRINCE WILLIAM | VA | PRINCE WILLIAM |
| 490955 | OTHER RICHMOND | VA | RICHMOND |
| 490957 | OTHER SOUTHAMPTON | VA | SOUTHAMPTON |
| 490959 | OTHER SPOTSYLVANIA | VA | SPOTSYLVANIA |
| 490961 | OTHER STAFFORD | VA | STAFFORD |
| 490963 | OTHER SURRY | VA | SURRY |
| 490999 | OTHER VA | VA | NOT-SPECIFIED |
| 490967 | OTHER WESTMORELAND | VA | WESTMORELAND |
| 490969 | OTHER YORK | VA | YORK |
| 490645 | OYSTER | VA | NORTHAMPTON |
| 499029 | POTOMAC CREEK (K.G.) | VA | KING GEORGE |
| 491061 | POTOMAC CREEK (S) | VA | STAFFORD |
| 493053 | POWELLS CREEK | VA | PRINCE WILLIAM |
| 495047 | PRESELY CREEK | VA | NORTHUMBERLAND |
| 491053 | QUANTICO CREEK | VA | PRINCE WILLIAM |
| 491101 | QUINBY | VA | ACCOMAC |
| 494067 | RAGGED POINT HOLLOW | VA | WESTMORELAND |
| 491029 | ROSIERS CREEK (K.G.) | VA | KING GEORGE |
| 499067 | ROSIERS CREEK (W) | VA | WESTMORELAND |
| 499101 | SANFORD | VA | ACCOMAC |
| 491167 | SHANNON BRANCH | VA | WESTMORELAND |
| 496029 | SOMERSET BEACH | VA | KING GEORGE |
| 497247 | THE GLEBE | VA | NORTHUMBERLAND |
| 495267 | TIDWELLS | VA | WESTMORELAND |
| 493061 | TOLSONS LANDING | VA | STAFFORD |

| | | | |
|--------|--------------------------|----|------------------------|
| 492029 | UPPER MACHODOC CREEK | VA | KING GEORGE |
| 490951 | VIRGINIA BEACH/LYNNHAVEN | VA | CITY OF VIRGINIA BEACH |
| 490401 | WACHAPREAGUE | VA | ACCOMAC |
| 495029 | WATERLOO | VA | KING GEORGE |
| 494061 | WIDEWATER | VA | STAFFORD |
| 492129 | WILLIAMS CREEK | VA | KING GEORGE |
| 490845 | WILLIS WHARF | VA | NORTHAMPTON |
| 498047 | YEOCOMICO RIVER (N) | VA | NORTHUMBERLAND |
| 491067 | YEOCOMICO RIVER (W) | VA | WESTMORELAND |
| 990999 | UNKNOWN | NK | UNKNOWN |

Appendix D. Gear Codes- Sorted by Gear Name

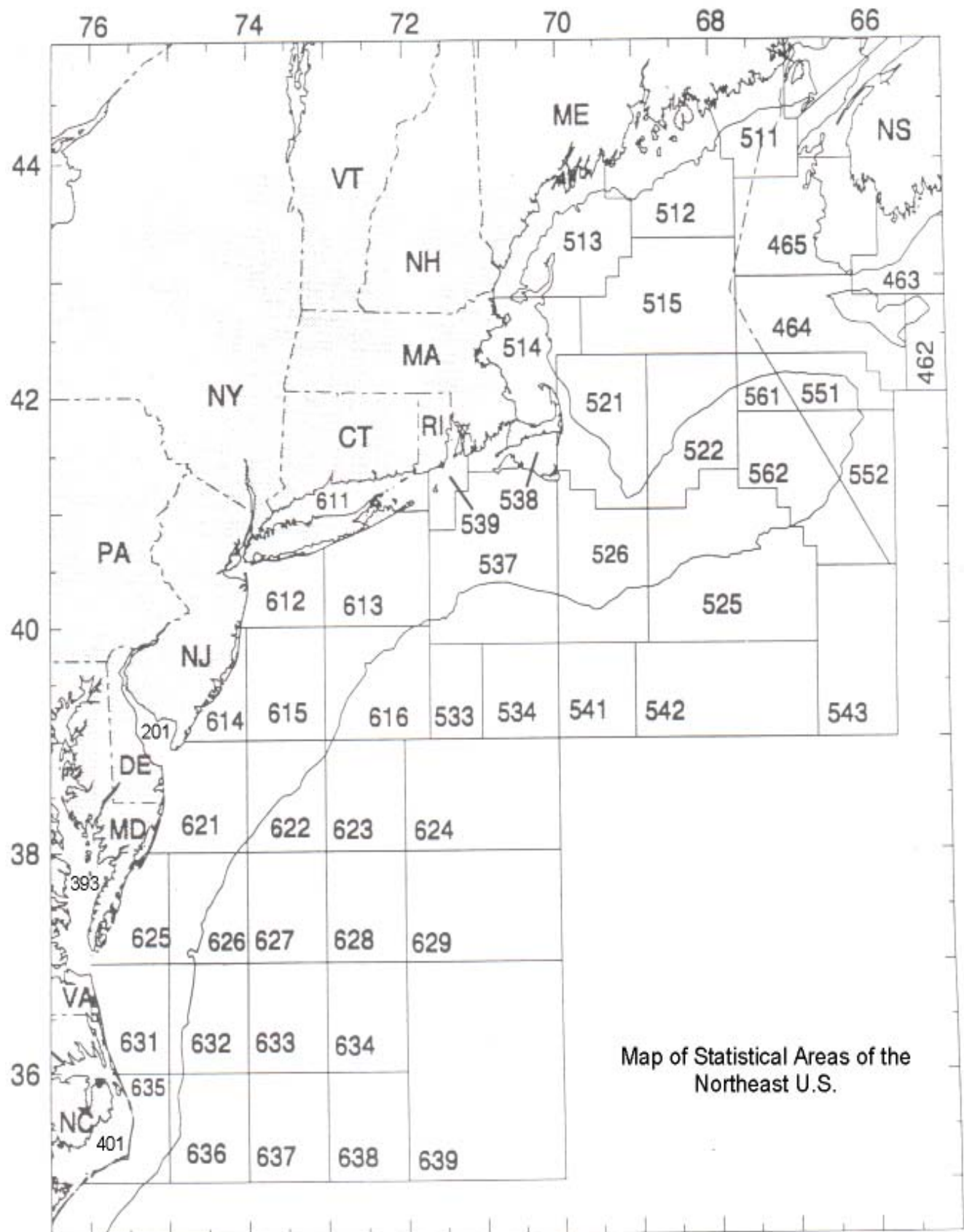
350 BEAM TRAWL, OTHER/NK SPECIES
 132 DREDGE, SCALLOP, SEA
 105 GILLNET, ANCHORED-FLOATING, FISH¹
 116 GILLNET, DRIFT-FLOATING, FISH²
 115 GILLNET, DRIFT, LARGE PELAGIC
 117 GILLNET, DRIFT-SINK, FISH³
 100 GILLNET, FIXED OR ANCHORED, SINK, OTHER/NK SPECIES⁴
 102 GILLNET, STAKE, OTHER
 020 HANDLINE (ROD & REEL)
 030 HARPOON, OTHER
 031 HARPOON, SWORDFISH
 070 HAUL SEINE, BEACH, COMMON
 071 HAUL SEINE, LONG
 010 LONGLINE, BOTTOM
 040 LONGLINE, PELAGIC
 200 POT + TRAP, LOBSTER OFFSHORE, NK
 301 POT + TRAP, BLUE CRAB
 183 POT + TRAP, CONCH
 300 POT + TRAP, CRAB OTHER
 181 POT + TRAP, FISH
 180 POT + TRAP, OTHER/NK SPECIES
 142 POUND NET, FISH
 121 PURSE SEINE, HERRING
 120 PURSE SEINE, OTHER/NK SPECIES
 124 PURSE SEINE, TUNA
 360 SCOTTISH SEINE
 050 TRAWL, OTTER, BOTTOM, FISH
 058 TRAWL, OTTER, BOTTOM, SHRIMP
 370 TRAWL, OTTER, MIDWATER
 170 TRAWL, OTTER, MIDWATER PAIRED
 060 TROLL LINE, OTHER

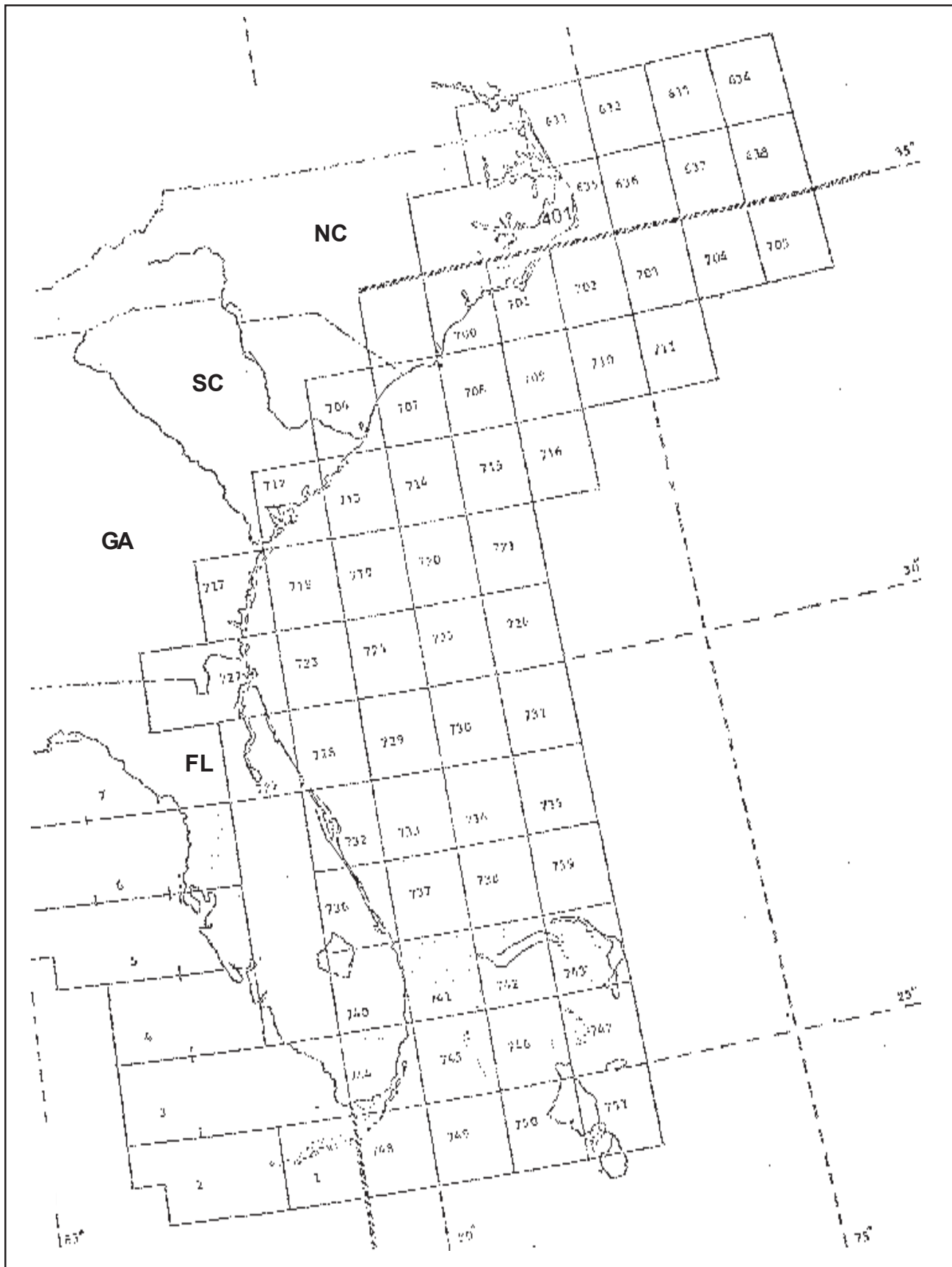
¹ An anchored-float gillnet is defined as a vertical wall of netting that is anchored or fixed to the substrate and is fished off the ocean bottom.

² A drift-float gillnet is defined as a vertical wall of netting that is not anchored or fixed to the substrate and is fished off the ocean bottom.

³ A drift-sink gillnet is defined as a vertical wall of netting that is not anchored or fixed to the substrate and is fished on the ocean bottom.

⁴ An anchored or fixed sink gillnet is defined as a vertical wall of netting that is anchored or fixed to the substrate and is fished on the ocean bottom.

Appendix E.1. Map of Statistical Areas of the Northeast U.S.

Appendix E.2. Map of Statistical Areas of the Southeast U.S.

Appendix F. Observer/Trip Identifier Instructions

Observer /Trip Identifiers are used on every log and data item associated with a trip.

Record a three character Observer Identifier combined with a four character Trip Number assigned to you for each trip. Use the same Observer/Trip Identifier on all forms for a trip.

The first three characters will always remain constant, as they are unique to the observer (i.e., A02, see below for complete example). The fourth, fifth and sixth characters will reflect how many trips the observer has been deployed on since the beginning of the calendar year (i.e., see below for complete example). The last character of the Observer/Trip Identifier indicates what kind of deployment the observer is on, with respect to fishery, sampling protocol, etc. Below are the possible endings to the Observer/Trip Identifier:

- ☐ A non-gillnet trip, (i.e., pelagic drift gillnet, longline, lobster pot, trawls, scallop dredge, etc.)
- A An aborted non-gillnet trip.
- C A complete fish sampling gillnet trip.
- D An aborted complete fish sampling gillnet trip.
- L A limited fish sampling gillnet trip.
- M An aborted limited fish sampling gillnet trip.

Examples: A02002L would indicate the second trip (002) of the calendar year for observer Green, assigned identifier A02, which happens to be a gillnet trip with limited fish sampling (L).

A07026☐ would indicate the twenty sixth trip (026) of the calendar year for observer White, assigned identifier A07, which happens to be a lobster pot trip (☐.

E60005D would indicate the fifth trip of the calendar year for observer Brown, assigned identifier E60, which happens to be a complete fish sampling gillnet trip that was aborted (D).

Appendix G. Page Numbering Instructions

All Logs except the Vessel And Trip Information Log, Gear Characteristics Logs, and the Photo Log are numbered. Below is a listing of each data log used in domestic observing, and the manner in which the logs should be page numbered, with examples provided.

VESSEL AND TRIP INFORMATION LOG

These logs are not currently page numbered.

GEAR CHARACTERISTICS LOG

These logs are not currently page numbered in any fishery.

HAUL LOG

These logs are numbered on a per **haul** basis in all fisheries. They are the “cover” sheet for the following other logs (listed in the order of ordering/numbering):

- Individual Animal Log

- Length Frequency Log

- Crustacean Sample Log

Example: A gillnet haul required two (2) Haul Logs to record all of the catch. A couple of sharks were caught in this haul as well, requiring one (1) Individual Animal Log. Finfish and crustaceans were sampled, requiring three (3) Length Frequency Logs and two (2) Crustacean Sample Logs. The page numbers for the two Haul Logs would be “1 of 8” and “2 of 8”.

INDIVIDUAL ANIMAL LOG

These logs are numbered on a per **haul** basis in all fisheries. They always immediately follow a corresponding Haul Log, so they may never have a page number lower than “2 of ...”.

Example: In the Haul Log example above, the one Individual Animal Log page number would be “3 of 8”.

Example: A gillnet haul required one (1) Haul Log to record all of the haul specific information and ten (10) Individual Animal Logs to sample all of the pelagic species caught in this haul. The page numbers for the Individual Animal Logs would be “2 of 11”, “3 of 11”, “4 of 11”, etc.

LENGTH FREQUENCY LOG

These logs are numbered on a per **haul** basis. They should always follow a corresponding Haul Log and any Individual Animal Logs (if any), so they may never have a page number lower than “2 of ...”.

Example: In the Haul Log example above, the Length Frequency Log page numbers would be “4 of 8”, “5 of 8” and “6 of 8”.

Example: An otter trawl trip haul sampled eight different species of finfish, requiring three (3) Length Frequency Logs to record all of the length data. No pelagic species or crustaceans were caught in this haul. The page numbers for these logs would be “2 of 4”, “3 of 4” and “4 of 4”.

CRUSTACEAN SAMPLE LOG

These logs are numbered on a per **haul** basis. They always follow a corresponding Haul Log and any Individual Animal Logs and/or Length Frequency Logs (if any), so they may never have a page number lower than “2 of ...”.

Example: In the Haul Log example above, the Crustacean Sample Log page numbers would be “7 of 8” and “8 of 8”.

Example: A lobster trip haul sampled 175 lobsters, requiring four (4) of these logs. No pelagic species or finfish were caught in this haul. The page numbers for these logs would be “2 of 5”, “3 of 5”, “4 of 5” and “5 of 5”.

SCALLOP DREDGE OFF-WATCH HAUL LOG

These logs are numbered on a per **trip** basis. A new log should be started for each off-watch period.

Example: A scallop trip required thirty (30) of these logs to record all of the hauls which occurred during the observer's off-watch periods. The page numbers would be "1 of 30", "2 of 30", "3 of 30", etc.

MARINE MAMMAL, SEA TURTLE AND DEBRIS SIGHTING LOG

These logs are numbered on a per **trip** basis. Comment pages, located on the back side of the log, always directly follow and are numbered after the corresponding log page.

Example: A trip required forty (40) of these logs (comment pages included). The page numbers would be "1 of 40" (log), "2 of 40" (comment page), "3 of 40" (possibly another comment page or a new log), etc.

INCIDENTAL TAKE LOG

These logs are numbered on a per **trip** basis.

Example: A trip of 20 incidental takes require three (3) logs to record them all. The page numbers for these logs would be "1 of 3", "2 of 3" and "3 of 3".

MARINE MAMMAL BIOLOGICAL SAMPLE LOG

These logs are numbered on a per **trip** basis. The log has two sides, each requiring a number.

Example: In the trip above of twenty incidental takes, two (2) logs are needed to record all of the information. The first animal was a bottlenose dolphin for which additional measurements were recorded on the back side of the first Biological Sample Log. The page numbers would be "1 of 3" (front), "2 of 3" (back side of first page) and "3 of 3" (front side of second log).

SEA TURTLE BIOLOGICAL SAMPLE LOG

These logs are numbered on a per **trip** basis. The log has two sides, each requiring a number.

Example: A trip caught 11 sea turtles, requiring two (2) logs to record all of the information. Sketch's were drawn for five of the turtles recorded on the first page, necessitating the use of the back side of the first log. The page numbers would be recorded as "1 of 3" (front of first page), "2 of 3" (back side of first page) and "3 of 3" (front of second page).

PHOTO LOG

These logs are not currently page numbered.

Appendix H. Vessel Equipment Inventory Codes

Used on the Vessel and Trip Information Log.

WHEELHOUSE ELECTRONICS

- 901 = LORAN
- 902 = Radar
- 903 = Echo Sounder
- 904 = Fax
- 905 = Plotters
- 906 = G.P.S. (Global Positioning System)
- 907 = Cellular Phone
- 908 = Vessel Tracking System
- 909 = VHF Radio
- 910 = Gyro Compass
- 911 = Navigational Echo Sounder
- 912 = Video Sounder
- 913 = Sonar (Single Direction)
- 914 = Sonar (Multiple Direction)
- 915 = Gyro Converter
- 916 = Direction Finder (Electronic Compass)
- 917 = Weather Satellite Receiver
- 918 = Wind Meter
- 919 = Satellite Navigation System
- 920 = Data Printer
- 921 = Doppler Log and Docking Sonar
- 922 = Auto Pilot
- 923 = Radio Telephone
- 924 = Watch Receiver
- 925 = Personal Computer
- 926 = Temperature Profiling System
- 927 = Single Side Band Radio
- 928 = Radio Direction Finder
- 929 = Bridge Watch
- 930 = CB Radio
- 931 = Depth Sensor
- 932 = Water Temperature Sensor

GEAR MOUNTED ELECTRONICS

- 937 = Headrope Transducer
- 938 = Depth Sensor
- 939 = Water Temperature Sensor
- 940 = Catch Monitor (Codend Sensor)
- 941 = Forward Scanning Headrope Sonar
- 942 = Net Width Sensor
- 943 = Water Salinity Sensor

- 944 = Net Speed Sensor
- 945 = Hull Mounted Hydrophone
- 946 = Net Pingers (actual use will be recorded elsewhere)
- 947 = Net Height Sensor
- 948 = Door Transducer

PROCESSING EQUIPMENT

- 955 = Filleting Machine
- 956 = Gutting Machine
- 957 = Skate Wing Cutter
- 958 = Grading/Sorting Machine
- 959 = Shucking Machine
- 960 = Vacuum Packing Machine
- 961 = Skinning Machine
- 962 = Scale
- 963 = Conveyer Belt (for sorting catch)
- 964 = Baiter
- 965 = Pot Dumper

REFRIGERATION/FREEZING EQUIPMENT

- 985 = Refrigerated Sea Water (RSW) - Flooded System
- 986 = Refrigerated Sea Water (RSW) - Spray System
- 987 = Brine Freezer
- 988 = Single Contact Plate Freezer
- 989 = Double Contact Plate Freezer
- 990 = Blast Freezer
- 991 = Holding Freezer
- 992 = Refrigerated Hull
- 993 = Ice Maker (Flaker)
- 994 = Generator (To run either refrigeration or processing equipment. Include backup generators.)
- 995 = Engine (To power refrigeration or processing equipment, NOT PROPULSION.)

ALL OTHER EQUIPMENT

- 999 = Other/Unknown

Appendix I. Time Lost Reason Codes

Used on the Vessel and Trip Information Log.

- 00 = Unknown.
- 01 = Gear conflict with another vessel.
- 02 = Gear damage repair.
- 03 = Engine repair.
- 04 = Awaiting arrival of other vessel, i.e., pair trawling or offloading.
- 05 = Coast Guard boarding.
- 06 = Medical emergency, i.e., medical evacuation.
- 07 = Weather conditions.
- 08 = Marine mammal interaction.
- 09 = Gear loss. Include only time spent trying to retrieve the gear.
- 10 = Vessel leaves a dock at the start of the trip, steams to another dock(s) or port(s) to engage in an activity (i.e., refueling, buying ice, picking up crew, etc.) and then steams to the fishing grounds. Record the total amount of time spent steaming to, and docked at, the other dock(s).
- 11 = Vessel returns to a dock after reaching the location where it will begin fishing, but before deploying the gear, OR returns to the dock before reaching the location where it will begin fishing. Record the total amount of time spent steaming out, steaming back to the dock and at the dock.
- 12 = Vessel returns to a dock **after completing fishing activities**, but no fish are offloaded. Vessel engages in an activity (i.e., refueling, dropping off crew, etc.) and then steams to the dock where the captain intends to sell most of the catch. Record the total amount of time spent at the first dock, plus the time spent steaming to the offloading dock.
- 13 = Vessel returns to a dock **after beginning fishing activities**, but no fish are offloaded. Vessel then returns to the fishing grounds. Record the total amount of time spent steaming back to the dock, time spent at the dock and time spent steaming back to the grounds.
- 99 = Other. Please record the time lost reason in COMMENTS.

Appendix J. Gear Condition Codes

Used on all Haul Logs, with specific codes for each fishery.

ALL HAUL LOGS

- 00 = Unknown.
- 99 = Other. Specify in COMMENTS.

TRAWL HAUL LOG

- 01 = No gear damage, or very few small, scattered holes.
- 02 = Wings twisted or torn, not exceeding 50% of meshes.
- 03 = Wings twisted or torn, exceeding 50% of meshes.
- 04 = Square and/or bosom torn, not exceeding 50% of meshes.
- 05 = Square and/or bosom torn, exceeding 50% of meshes.
- 06 = Belly torn, not exceeding 50% of meshes.
- 07 = Belly torn, exceeding 50% of meshes.
- 08 = Codend and/or extension piece torn, not exceeding 10% of meshes.
- 09 = Codend and/or extension piece torn, exceeding 10% of meshes.
- 10 = Hang-up, causing gear to be hauled back before scheduled time; minor damage.
- 11 = Parted legs, sweep or head rope.
- 12 = Tear up exceeding gear condition of code 02, but not total net destruction.
- 13 = Obstruction in the gear, such as a large amount of fixed gear, boulders, etc.
- 14 = Crossed doors.
- 15 = Open codend.
- 16 = Major hang-up or tear-up, or loss of gear.
- 17 = Grate clogged with fish or debris.

GILLNET and BEACH SEINE HAUL LOG

- 21 = No gear damage, or very few small, scattered holes.
- 22 = Small number of torn meshes, not exceeding 25% of any one net, each net may be torn slightly.
- 23 = Less than 50% of the nets have less than 50% of the meshes torn.
- 24 = 50% or more of the nets have less than 50% of the meshes torn.
- 25 = Less than 50% of the nets are obstructed by a large object.
- 26 = 50% or more of the nets are obstructed by a large object.
- 27 = Less than 50% of the nets have 50% or more of the meshes torn.
- 28 = 50% or more of the nets have 50% or more of the meshes torn.
- 29 = Nets in the string totally balled up.

PELAGIC DRIFT GILLNET HAUL LOG

- 31 = No gear damage, or very few small, scattered holes.
- 32 = Less than 5% of the net torn.
- 33 = Between 5% and 25% of the net torn.
- 34 = Between 25% and 50% of the net torn.

- 35 = Greater than 50% of the net torn.
- 39 = Net totally balled up.

LOBSTER, CRAB AND FISH POT HAUL LOG

- 41 = No gear damage.
- 42 = Less than 25% of the pots have enough damage to allow the target species to be released. This damage includes loss of the escape panel.
- 43 = Between 25% and 50% of the pots have enough damage to allow the target species to be released.
- 44 = Greater than 50% of the pots have enough damage to allow the target species to be released.
- 45 = Less than 25% of the pots are un-fishable.
- 46 = Between 25% and 50% of the pots are un-fishable.
- 47 = Greater than 50% of the pots are un-fishable.

PURSE SEINE HAUL LOG

- 51 = No or insignificant gear damage.
- 52 = Minor wrap of wire around gear.
- 53 = Major wrap of wire around gear.
- 54 = Minor tear-ups of net, not exceeding total of 5% of the net.
- 55 = Tear-up exceeding code 54, but not total, net destruction.
- 58 = Total net destruction.

LONGLINE HAUL LOG

- 61 = No gear damage, or only a few hooks missing.
- 62 = Less than 50% of gear fouled, i.e., weather/oceanic conditions caused the gear to become tangled, or otherwise lowered the fishability of the gear.
- 63 = Greater than 50% of gear fouled, i.e., weather/oceanic conditions caused the gear to become tangled, or otherwise lowered the fishability of the gear.
- 64 = Less than 50% of hooks missing.
- 65 = Greater than 50% of hooks missing.
- 66 = Parted off, no damage.
- 67 = Parted off, less than 50% of gear damaged.
- 68 = Gear completely damaged, or completely lost.

SCALLOP DREDGE HAUL LOG

- 71 = No gear damage, or insignificant gear damage.
- 72 = Ring bag broken or missing.
- 73 = Several rings destroyed.
- 74 = Club stick detached.
- 75 = One dredge turned over.
- 76 = Two dredges turned over.
- 77 = Dredges crossed.
- 78 = One dredge lost or totally damaged.
- 79 = Two dredges lost or totally damaged.

Appendix K. Weather Codes

Used on all Haul Logs and the Marine Mammal, Sea Turtle and Debris Sighting Log.

- 00 = Unknown.
- 01 = Clear.
- 02 = Partly cloudy.
- 03 = Continuous layers of clouds.
- 04 = Drizzle.
- 05 = Rain.
- 06 = Showers.
- 07 = Thunderstorms.
- 08 = Rain and fog.
- 09 = Fog or thick haze.
- 10 = Snow, or rain and snow mixed.
- 11 = Blowing snow.
- 99 = Other. Describe in COMMENTS.

Appendix L. Material Codes

Used on all Gear Characteristics Logs, with specific codes for each fishery.

ALL GEAR CHARACTERISTICS LOGS

- 0 or 00 = Unknown.
- 9 or 99 = Other. Specify the material.

TRAWL and PAIR TRAWL GEAR CHARACTERISTICS LOG

Net Construction Material:

- 01 = Nylon.
- 02 = Poly.
- 03 = Kevlar®.
- 04 = Spectra®.
- 05 = Tenex®.
- 06 = Nomex®.
- 98 = Combination. Specify all construction material types.

GILLNET, BEACH SEINE, and PELAGIC DRIFT GILLNET GEAR CHARACTERISTICS LOGS

Net/Bunt Material:

- 1 = Nylon. "Mono" is a single strand of nylon.

"Multi-mono" is composed of multiple strands (usually four) of twisted or braided monofilament nylon.

LOBSTER, CRAB AND FISH POT GEAR CHARACTERISTICS LOG

Pot Side Construction Material:

- 1 = Wood lathe.
- 2 = Plastic coated wire.
- 3 = Twine mesh.
- 4 = Plastic mesh.
- 8 = Combination.

Biodegradable Panel Attachment Material:

- 1 = Iron hogrings.
- 2 = Degradable plastic.
- 3 = Softwood lathe.
- 4 = Uncoated wire.

PURSE SEINE GEAR CHARACTERISTICS LOG

Net and Sack/Bunt Construction Material:

- 01 = Nylon.
- 02 = Poly.
- 03 = Kevlar®.
- 04 = Spectra®.
- 98 = Combination. Specify all construction material types.

Purse Ring Material:

- 1 = Steel.
- 2 = Iron.
- 3 = Alloy.

LONGLINE GEAR CHARACTERISTICS LOG

Mainline, Gangion and Leader Material:

- 1 = Monofilament nylon.
- 2 = Cotton. (Mainline and Gangion only)
- 3 = Steel wire. (Mainline and Gangion only)

Appendix M. Color Codes

Used for:

- NET COLOR on the Gillnet Gear Characteristics Log (GGG).
- NET COLOR on the Pelagic Drift Gillnet Gear Characteristics Log (GPG).
- NET COLOR and BUNT COLOR on the Beach Seine Gear Characteristics Log (BSG).
- MAINLINE COLOR, GANGION COLOR and LIGHT STICK COLOR on the Longline Gear Characteristics Log (LLG, although not all colors used for each field).

| | |
|---|----------------------|
| 00 = Unknown. | (GGG, GPG, BSG, LLG) |
| 01 = Clear. | (GGG, GPG, BSG, LLG) |
| 02 = White. | (GGG, GPG, BSG, LLG) |
| 03 = Pink. | (GGG, GPG, BSG, LLG) |
| 04 = Black. | (GGG, GPG, BSG, LLG) |
| 05 = Green. | (GGG, GPG, BSG, LLG) |
| 06 = Blue. | (GGG, GPG, BSG, LLG) |
| 07 = Multi-color ¹ | (GGG, GPG, BSG, LLG) |
| 08 = Red. | (GGG, GPG, BSG, LLG) |
| 09 = Orange. | (GGG, BSG, LLG) |
| 10 = Purple. | (GGG, BSG, LLG) |
| 98 = Combination ² . Record color in COMMENTS. | (GGG, BSG, LLG) |
| 99 = Other ³ . Record the color in COMMENTS. | (GGG, GPG, BSG, LLG) |

¹ “Multi-color” is defined as more than one color within one item, e.g., 1 net, 1 lightstick, etc.

² “Combination” is defined as more than one color within an entire **gear** item, e.g., a string.

³ Do not use “Other” for shade differentiations. Code these as the most appropriate color (i.e., “light blue” should be coded as 06 “Blue” and “yellow” as 99 “Other”). Comment when appropriate, regardless of code choice.

Appendix N. Shape Codes

Used for:

- FISH OUTLET SHAPE on the Trawl Gear Characteristics Log (OTG).
- FISH OUTLET SHAPE on the Pair Trawl Gear Characteristics Log (PRG).
- POT SHAPE and ESCAPE VENT SHAPE on the Lobster, Crab and Fish Pot Gear Characteristics Log (PTG, although not all shapes used for each field).

| | | |
|------|----------------------------------|-----------------|
| 00 = | Unknown. | (OTG, PRG, PTG) |
| 01 = | Rectangular. | (OTG, PRG, PTG) |
| 02 = | Round/Oval. | (PTG) |
| 03 = | ½ Round. | (PTG) |
| 04 = | Cone. | (PTG) |
| 05 = | Trapezoid. | (PTG) |
| 06 = | Square. | (OTG, PRG, PTG) |
| 07 = | Diamond. | (OTG, PRG) |
| 08 = | Triangular. | (OTG, PRG) |
| 99 = | Other. Record shape in COMMENTS. | (OTG, PRG, PTG) |

Appendix O. Bait Codes

Used on the Lobster, Crab and Fish Pot Haul Log and the Longline Haul Log.

KIND

- 00 = Unknown.
- 01 = Mackerel.
- 02 = Herring.
- 03 = Squid.
- 04 = Artificial. (Leave BAIT TYPE and BAIT CONDITION blank.)
- 05 = Redfish.
- 06 = Sardine.
- 07 = Scad.
- 08 = Skate.
- 09 = Clams
- 99 = Other. Record the bait kind in COMMENTS.

TYPE

- 0 = Unknown.
- 1 = Whole.
- 2 = Cut.
- 3 = Live.
- 9 = Other. Record the bait type in COMMENTS.

CONDITION

- 0 = Unknown.
- 1 = Previously frozen.
- 2 = Fresh.
- 3 = Salted.
- 6 = Frozen.
- 7 = Semi-frozen.
- 8 = Combination. Record all bait conditions in COMMENTS.
- 9 = Other. Record the bait condition in COMMENTS.

Appendix P. Vernier Caliper Instructions

Calipers are used to collect the following measurements:

- Pot entrance ring diameter on the Lobster, Fish and Crab Pot Gear Characteristics Log.
- Escape vent length and height on the Lobster, Fish and Crab Pot Gear Characteristics Log.
- Inside and outside ring diameter and twine top inside mesh measurements on the Scallop Dredge Gear Characteristics Log.
- Codend and codend liner inside mesh measurements on the Trawl/Pair Trawl Gear Characteristics Logs.
- Lobster carapace length on the Crustacean Sample Log.
- Crab carapace width on the Crustacean Sample Log.
- Net inside mesh size measurements on the Gillnet Gear Characteristics Log.
- Net and bunt inside mesh size measurements on the Beach Seine Gear Characteristics Log.

GENERAL INSTRUCTIONS

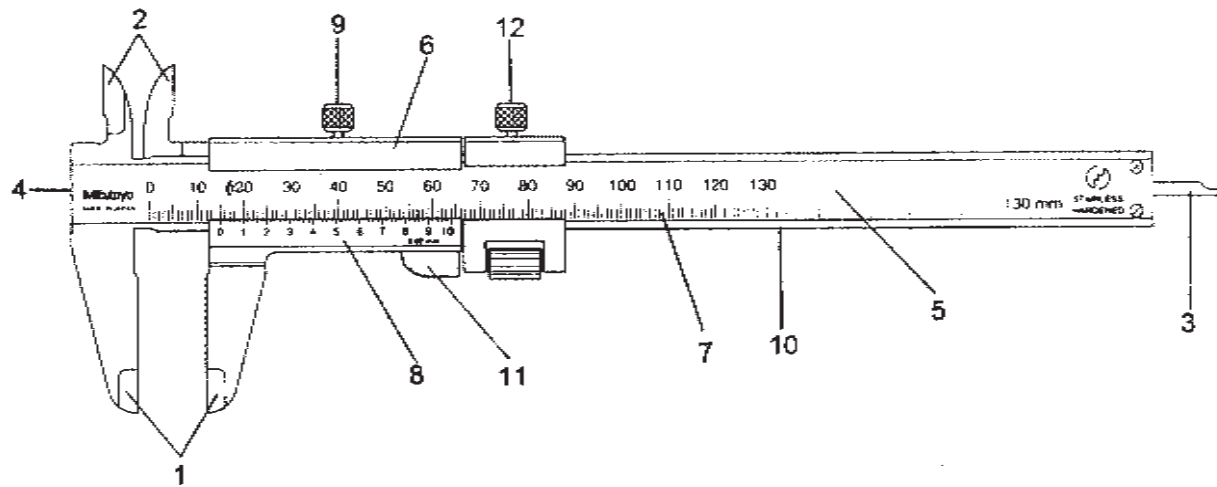
- Reference Figure 1.
- The Vernier Calipers should be used when requested in the manual instructions. Do not substitute measurements obtained from any other tool. If caliper measurements are not possible, measurements should be recorded in the COMMENT section of the corresponding log.
- The calipers are used by grasping the main beam between the palm and fingers, while pushing or pulling the slide with the thumb on the knurled thumb rest.
- The thumb should exert approximately 5 pounds of force in either direction while the measurement is read. Do not apply excessive measurement force, as this will distort the measurements.
- The slider may be clamped with the clamp screw for easier reading of the scale.
- Measurements are read at the zero mark of the slider. Use the top of the main scale to obtain measurements to the nearest millimeter.
- Do not use the fine adjustment or the vernier scale.

OUTSIDE MEASUREMENTS

- Use for scallop ring outside measurements, clam/quahog measurements and crustacean carapace measurements.
- Place item to be measured as close to the reference surface as possible, making its edges contact the outside jaws as perfectly as possible.

INSIDE MEASUREMENTS

- Use for mesh measurement, scallop ring inside measurements and lobster pot escape vent measurements.
- Place the inside jaws as deep as possible into the item to be measured, making as perfect a contact as possible.
- Measure in a straight line. Do not allow the calipers to measure at an angle.
- When measuring mesh, do not apply excessive force to stretch the mesh too much beyond its normal hanging configuration.



- | | | | |
|----|---------------|-----|------------------------------|
| 1. | Outside jaws. | 7. | Main Scale. |
| 2. | Inside jaws. | 8. | Vernier scale- do not use. |
| 3. | Depth bar. | 9. | Clamp screw. |
| 4. | Step surface. | 10. | Reference Surface. |
| 5. | Main beam. | 11. | Knurled thumb rest. |
| 6. | Slider. | 12. | Fine adjustment- do not use. |

Figure 1. Vernier Caliper parts.

PROPER VERNIER CALIPER MAINTENANCE

- Wipe dust and dirt from all surfaces and rinse in fresh water after each use.
- Apply WD-40 to the sliding surfaces. Lack of lubrication may cause scratching on the sliding surfaces.
- Before storage, make sure the zero lines align when the jaws are closed, with no space observed between the jaws.
- Store calipers in their plastic sheath in a safe place when not in use.

GENERAL CONVERSIONS

| Nautical Units | Mass | 24 Hour Clock |
|---|-------------------------------|-----------------------|
| 1 fathom = 6 feet | 1 pound = 453.59 grams | 12:00 Midnight = 0000 |
| 1 fathom = 1.83 meters | 1 pound = 0.45 kilograms | 1:00 a.m. = 0100 |
| 1 nautical mile = 6076 feet | 1 kilogram = 2.20 pounds | 2:00 a.m. = 0200 |
| 1 nautical mile = 1852 meters | 1 standard ton = 2000 pounds | 3:00 a.m. = 0300 |
| 1 nautical mile = 1.15 statue miles | 1 metric ton = 2204.60 pounds | 4:00 a.m. = 0400 |
| 1 knot = 1 nautical mile/hr | 1 metric ton = 1000 kilograms | 5:00 a.m. = 0500 |
| | | 6:00 a.m. = 0600 |
| | | 7:00 a.m. = 0700 |
| | | 8:00 a.m. = 0800 |
| | | 9:00 a.m. = 0900 |
| | | 10:00 a.m. = 1000 |
| | | 11:00 a.m. = 1100 |
| | | 12:00 noon = 1200 |
| | | 1:00 p.m. = 1300 |
| | | 2:00 p.m. = 1400 |
| | | 3:00 p.m. = 1500 |
| | | 4:00 p.m. = 1600 |
| | | 5:00 p.m. = 1700 |
| | | 6:00 p.m. = 1800 |
| | | 7:00 p.m. = 1900 |
| | | 8:00 p.m. = 2000 |
| | | 9:00 p.m. = 2100 |
| | | 10:00 p.m. = 2200 |
| | | 11:00 p.m. = 2300 |
| Length | Metric Units | |
| 1 inch = 2.54 centimeters | 1 meter = 100 centimeters | |
| 1 foot = 30.48 centimeters | 1 kilogram = 1000 grams | |
| 1 foot = 0.30 meters | 1 liter = 1000 milliliters | |
| 1 yard = 3 feet | mega = 1,000,000 | |
| 1 meter = 3.28 feet | kilo = 1,000 | |
| 1 meter = 39.37 inches | deca = 10 | |
| 1 statue mile = 5280 feet | deci = 0.1 (tenth) | |
| 1 statue mile = 1.61 kilometers | centi = 0.01 (hundredth) | |
| 1 kilometer = 0.62 statue mile | mili = 0.001 (thousandth) | |
| Seconds to Tenths of Minutes (or Minutes to Tenths of Hours) | Circular Measure | |
| 0-2 seconds = 0.0 minutes | 60 seconds = 1 minute | |
| 3-8 seconds = 0.1 minutes | 60 minutes = 1 degree | |
| 9-14 seconds = 0.2 minutes | 90 degrees = 1 quadrant | |
| 15-20 seconds = 0.3 minutes | | |
| 21-26 seconds = 0.4 minutes | Volume | |
| 27-32 seconds = 0.5 minutes | 1 liter = 1.05 quarts | |
| 33-38 seconds = 0.6 minutes | 1 liter = 0.26 gallons | |
| 39-44 seconds = 0.7 minutes | 1 gallon = 3.78 liters | |
| 45-50 seconds = 0.8 minutes | | |
| 51-56 seconds = 0.9 minutes | | |
| 57-60 seconds = 1.0 minutes | | |

TWINE SIZE CONVERSIONS

| Gillnet Monofilament | | |
|----------------------|---------------|-----------|
| Size | Diameter (mm) | Old Size |
| 3 | 0.28 | 69 |
| 4 | 0.33 | 104 |
| 6 | 0.40 | 139 |
| 7 | 0.45 | - |
| 8 | 0.47 | 177(208) |
| 10 | 0.52 | 208(208L) |
| 12 | 0.57 | 277 |
| 14 | 0.62 | - |
| 16 | 0.66 | - |
| 18 | 0.70 | - |
| 20 | 0.74 | - |
| 24 | 0.81 | - |
| 30 | 0.90 | - |
| 40 | 1.05 | - |

| Pelagic Drift Gillnet Twisted Nylon | | | |
|-------------------------------------|---------|-------------------------|-----------|
| Size | Deniers | Breaking Strength (lbs) | # Feet/lb |
| 9 | 24 | 84 | 2250 |
| 12 | 30 | 105 | 1824 |
| 15 | 36 | 125 | 1550 |
| 18 | 48 | 160 | 1152 |
| 21 | 60 | 217 | 860 |
| 24 | 72 | 242 | 740 |
| 30 | 84 | 297 | 625 |
| 36 | 96 | 336 | 520 |
| 42 | 108 | 365 | 470 |
| 54 | 144 | 460 | 360 |
| 60 | 168 | 552 | 305 |
| 72 | 192 | 601 | 270 |
| 84 | 228 | 765 | 220 |
| 96 | 276 | 905 | 177 |
| 120 | 336 | 1090 | 135 |

General Twine Size Codes: 000 = Unknown, 998 = Combination

TEMPERATURE CONVERSIONS

| F | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 28 | -2.2 | -2.2 | -2.1 | -2.1 | -2.0 | -1.9 | -1.9 | -1.8 | -1.8 | -1.7 |
| 29 | -1.7 | -1.6 | -1.6 | -1.5 | -1.4 | -1.4 | -1.3 | -1.3 | -1.2 | -1.2 |
| 30 | -1.1 | -1.1 | -1.0 | -0.9 | -0.9 | -0.8 | -0.8 | -0.7 | -0.7 | -0.6 |
| 31 | -0.6 | -0.5 | -0.4 | -0.4 | -0.3 | -0.3 | -0.2 | -0.2 | -0.1 | -0.1 |
| 32 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 |
| 33 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 1.0 | 1.1 |
| 34 | 1.1 | 1.2 | 1.2 | 1.3 | 1.3 | 1.4 | 1.4 | 1.5 | 1.6 | 1.6 |
| 35 | 1.7 | 1.7 | 1.8 | 1.8 | 1.9 | 1.9 | 2.0 | 2.1 | 2.1 | 2.2 |
| 36 | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | 2.5 | 2.6 | 2.6 | 2.7 | 2.7 |
| 37 | 2.8 | 2.8 | 2.9 | 2.9 | 3.0 | 3.1 | 3.1 | 3.2 | 3.2 | 3.3 |
| 38 | 3.3 | 3.4 | 3.4 | 3.5 | 3.6 | 3.6 | 3.7 | 3.7 | 3.8 | 3.8 |
| 39 | 3.9 | 3.9 | 4.0 | 4.1 | 4.1 | 4.2 | 4.2 | 4.3 | 4.3 | 4.4 |
| 40 | 4.4 | 4.5 | 4.6 | 4.6 | 4.7 | 4.7 | 4.8 | 4.8 | 4.9 | 4.9 |
| 41 | 5.0 | 5.1 | 5.1 | 5.2 | 5.2 | 5.3 | 5.3 | 5.4 | 5.4 | 5.5 |
| 42 | 5.6 | 5.6 | 5.7 | 5.7 | 5.8 | 5.8 | 5.9 | 5.9 | 6.0 | 6.1 |
| 43 | 6.1 | 6.2 | 6.2 | 6.3 | 6.3 | 6.4 | 6.4 | 6.5 | 6.6 | 6.6 |
| 44 | 6.7 | 6.7 | 6.8 | 6.8 | 6.9 | 6.9 | 7.0 | 7.1 | 7.1 | 7.2 |
| 45 | 7.2 | 7.3 | 7.3 | 7.4 | 7.4 | 7.5 | 7.6 | 7.6 | 7.7 | 7.7 |
| 46 | 7.8 | 7.8 | 7.9 | 7.9 | 8.0 | 8.1 | 8.1 | 8.2 | 8.2 | 8.3 |
| 47 | 8.3 | 8.4 | 8.4 | 8.5 | 8.6 | 8.6 | 8.7 | 8.7 | 8.8 | 8.8 |
| 48 | 8.9 | 8.9 | 9.0 | 9.1 | 9.1 | 9.2 | 9.2 | 9.3 | 9.3 | 9.4 |
| 49 | 9.4 | 9.5 | 9.6 | 9.6 | 9.7 | 9.7 | 9.8 | 9.8 | 9.9 | 9.9 |
| 50 | 10.0 | 10.1 | 10.1 | 10.2 | 10.2 | 10.3 | 10.3 | 10.4 | 10.4 | 10.5 |
| 51 | 10.6 | 10.6 | 10.7 | 10.7 | 10.8 | 10.8 | 10.9 | 10.9 | 11.0 | 11.1 |
| 52 | 11.1 | 11.2 | 11.2 | 11.3 | 11.3 | 11.4 | 11.4 | 11.5 | 11.6 | 11.6 |
| 53 | 11.7 | 11.7 | 11.8 | 11.8 | 11.9 | 11.9 | 12.0 | 12.1 | 12.1 | 12.2 |
| 54 | 12.2 | 12.3 | 12.3 | 12.4 | 12.4 | 12.5 | 12.6 | 12.6 | 12.7 | 12.7 |
| 55 | 12.8 | 12.8 | 12.9 | 12.9 | 13.0 | 13.1 | 13.1 | 13.2 | 13.2 | 13.3 |
| 56 | 13.3 | 13.4 | 13.4 | 13.5 | 13.6 | 13.6 | 13.7 | 13.7 | 13.8 | 13.8 |
| 57 | 13.9 | 13.9 | 14.0 | 14.1 | 14.1 | 14.2 | 14.2 | 14.3 | 14.3 | 14.4 |
| 58 | 14.4 | 14.5 | 14.6 | 14.6 | 14.7 | 14.7 | 14.8 | 14.8 | 14.9 | 14.9 |
| 59 | 15.0 | 15.1 | 15.1 | 15.2 | 15.2 | 15.3 | 15.3 | 15.4 | 15.4 | 15.5 |
| 60 | 15.6 | 15.6 | 15.7 | 15.7 | 15.8 | 15.8 | 15.9 | 15.9 | 16.0 | 16.1 |
| 61 | 16.1 | 16.2 | 16.2 | 16.3 | 16.3 | 16.4 | 16.4 | 16.5 | 16.6 | 16.6 |
| 62 | 16.7 | 16.7 | 16.8 | 16.8 | 16.9 | 16.9 | 17.0 | 17.1 | 17.1 | 17.2 |
| 63 | 17.2 | 17.3 | 17.3 | 17.4 | 17.4 | 17.5 | 17.6 | 17.6 | 17.7 | 17.7 |
| 64 | 17.8 | 17.8 | 17.9 | 17.9 | 18.0 | 18.1 | 18.1 | 18.2 | 18.2 | 18.3 |
| 65 | 18.3 | 18.4 | 18.4 | 18.5 | 18.6 | 18.6 | 18.7 | 18.7 | 18.8 | 18.8 |
| 66 | 18.9 | 18.9 | 19.0 | 19.1 | 19.1 | 19.2 | 19.2 | 19.3 | 19.3 | 19.4 |
| 67 | 19.4 | 19.5 | 19.6 | 19.6 | 19.7 | 19.7 | 19.8 | 19.8 | 19.9 | 19.9 |
| 68 | 20.0 | 20.1 | 20.1 | 20.2 | 20.2 | 20.3 | 20.3 | 20.4 | 20.4 | 20.5 |
| 69 | 20.6 | 20.6 | 20.7 | 20.7 | 20.8 | 20.8 | 20.9 | 20.9 | 21.0 | 21.1 |
| 70 | 21.1 | 21.2 | 21.2 | 21.3 | 21.3 | 21.4 | 21.4 | 21.5 | 21.6 | 21.6 |

Appendix R. Species List and Corresponding Logs

| COMMON NAME | MARKET CATEGORY | LOG |
|------------------------------|------------------------|------------|
| ALEWIFE | | SPP |
| ALLIGATORFISH | | SPP |
| AMBERJACK, NK | | IAL |
| ANCHOVY, BAY | | SPP |
| ANCHOVY, NK | | SPP |
| ANCHOVY, STRIPED | | SPP |
| ANEMONE, NK | | SPP |
| ARGENTINE, ATLANTIC | | SPP |
| BARRACUDA, NK | | IAL |
| BARRELFISH | | SPP |
| BASS, STRIPED | | SPP |
| BATFISH, ATLANTIC | | SPP |
| BATFISH, NK | | SPP |
| BEARDFISH | | SPP |
| BIRD, NK | | INC |
| BLENNY, NK (FISH) | | SPP |
| BLUEFISH | | SPP |
| BOARFISH, DEEPBODY | | SPP |
| BOARFISH, NK | | SPP |
| BONE, NK | | SPP |
| BONITO, ATLANTIC | ROUND | SPP, IAL* |
| BOOBY, BROWN | | INC |
| BOOBY, MASKED | | INC |
| BUFFLEHEAD | | INC |
| BUTTERFISH | | SPP |
| CAPELIN | | SPP |
| CARP | | SPP |
| CLAM, BLOODARC | | SPP |
| CLAM, NK | | SPP |
| CLAM, RAZOR | | SPP |
| CLAM, SOFT-SHELLED | | SPP |
| CLAM, STIMPSONS SURF (ARTIC) | | SPP |
| CLAM, SURF | | SPP |
| COBIA | | IAL |
| COD, ATLANTIC | CHEEKS | SPP |
| COD, ATLANTIC | ROUND | SPP |
| CODLING, METALLIC | | SPP |
| CORAL, STONY, NK | | SPP |
| CORMORANT, DBL CREST | | INC |
| CORMORANT, GREAT | | INC |
| CORMORANT, NK | | INC |
| CRAB, BLUE | | SPP, CRU |
| CRAB, CANCER, NK | | SPP, CRU |
| CRAB, DEEPSEA, RED | | SPP, CRU |
| CRAB, DEEPSEA, RED | BUTCHERED | SPP, CRU |
| CRAB, DEEPSEA, RED | PARTIALLY PROCESSED | SPP, CRU |
| CRAB, GREEN | | SPP, CRU |
| CRAB, HERMIT, NK | | SPP, CRU |
| CRAB, HORSESHOE | | SPP, CRU |
| CRAB, JONAH | | SPP, CRU |
| CRAB, NORTHERN STONE | | SPP, CRU |
| CRAB, ROCK | | SPP, CRU |
| CRAB, SNOW | | SPP, CRU |

| COMMON NAME | MARKET CATEGORY | LOG |
|------------------------------|-----------------|----------|
| CRAB, SPECKLED, NK | | SPP, CRU |
| CRAB, SPIDER, NK | | SPP, CRU |
| CRAB, SPIDER, PORTLY | | SPP, CRU |
| CRAB, TRUE, NK | | SPP, CRU |
| CRAPPIE, NK | | SPP |
| CROAKER, ATLANTIC | | SPP |
| CUNNER (YELLOW PERCH) | | SPP |
| CUSK | | SPP |
| CUSK-EEL, NK | | SPP |
| CUTLASSFISH, ATL | | IAL |
| DEALFISH (RIBBONFISH) | | SPP |
| DEBRIS, FISHING GEAR | | SPP |
| DEBRIS, GLASS | | SPP |
| DEBRIS, METAL | | SPP |
| DEBRIS, NK | | SPP |
| DEBRIS, PLASTIC | | SPP |
| DEBRIS, ROCK | | SPP |
| DEBRIS, WOOD | | SPP |
| DOGFISH, CHAIN | ROUND | SPP |
| DOGFISH, NK | ROUND | SPP |
| DOGFISH, NK | TAILS | SPP |
| DOGFISH, NK | FINS | SPP |
| DOGFISH, SMOOTH | ROUND | SPP |
| DOGFISH, SMOOTH | TAILS | SPP |
| DOGFISH, SMOOTH | FINS | SPP |
| DOGFISH, SPINY | ROUND | SPP |
| DOGFISH, SPINY | BELLYFLAPS | SPP |
| DOGFISH, SPINY | TAILS | SPP |
| DOGFISH, SPINY | FINS | SPP |
| DOLPHIN, BOTTLENOSE | | INC |
| DOLPHIN, CLYMENE | | INC |
| DOLPHIN, FRASER'S | | INC |
| DOLPHIN, NK (MAMMAL) | | INC |
| DOLPHIN, PANTROPICAL SPOTTED | | INC |
| DOLPHIN, RISSO'S | | INC |
| DOLPHIN, ROUGH TOOTH | | INC |
| DOLPHIN, SADDLEBACK | | INC |
| DOLPHIN, SPINNER | | INC |
| DOLPHIN, SPOTD, ATL | | INC |
| DOLPHIN, SPOTD, BRID | | INC |
| DOLPHIN, SPOTD, NK | | INC |
| DOLPHIN, STRIPED | | INC |
| DOLPHIN, WHITEBEAKED | | INC |
| DOLPHIN, WHITESIDED | | INC |
| DOLPHINFISH (MAHI MAHI) | | IAL |
| DORY, BUCKLER (JOHN) | | SPP |
| DORY, NK | | SPP |
| DOVEKIE | | INC |
| DRAGONFISH, BOA | | SPP |
| DRUM, BLACK | | SPP |
| DRUM, NK | | SPP |
| DRUM, RED | | SPP |
| ECHINODERM, NK | | SPP |
| EEL, AMERICAN | | SPP |

| COMMON NAME | MARKET CATEGORY | LOG |
|---------------------------------|-----------------|----------|
| EEL, CONGER | | SPP |
| EEL, GARDEN, NK | | SPP |
| EEL, NK | | SPP |
| EEL, ROCK (GUNNEL) | | SPP |
| EEL, SAND LANCE, NK | | SPP |
| EEL, SLENDER SNIPE | | SPP |
| EELGRASS | | SPP |
| EELPOUT, NK | | SPP |
| EGGS, NK | | SPP |
| EIDER, COMMON | | INC |
| ESCOLAR | | IAL |
| FILEFISH, NK | | SPP |
| FISH EGGS, NK | | SPP |
| FISH, NK | | IAL, SPP |
| FLOUNDER, AMERICAN PLAICE | | SPP |
| FLOUNDER, FOURSPOT | | SPP |
| FLOUNDER, GULFSTREAM | | SPP |
| FLOUNDER, LEFTEYE, NK | | SPP |
| FLOUNDER, NK | | SPP |
| FLOUNDER, SAND DAB (WINDOWPANE) | | SPP |
| FLOUNDER, SOUTHERN | | SPP |
| FLOUNDER, SUMMER (FLUKE) | | SPP |
| FLOUNDER, WINTER (BLACKBACK) | | SPP |
| FLOUNDER, WITCH (GREY SOLE) | | SPP |
| FLOUNDER, YELLOWTAIL | | SPP |
| FRIGATEBIRD, MAGNIF | | INC |
| FULMAR, NORTHERN | | INC |
| GANNET, NORTHERN | | INC |
| GAPER, RED EYE | | SPP |
| GARFISH (NEEDLEFISH) | | SPP |
| GREBE, HORNED | | INC |
| GREBE, NK | | INC |
| GREBE, PIED BILLED | | INC |
| GREBE, RED NECKED | | INC |
| GRENADIER, COMMON (MARLINSPIKE) | | SPP |
| GRENADIER, LONG-NOSED | | SPP |
| GRENADIER, NK | | SPP |
| GRENADIER, ROUGHHEAD | | SPP |
| GROUND FISH, NK | | SPP |
| GROUPE, NK | | IAL |
| GROUPE, SNOWY | UNCLASSIFIED | IAL |
| GRUNT, NK | | SPP |
| GUILLEMOT, BLACK | | INC |
| GULL, BLACK-HEADED | | INC |
| GULL, BONAPARTE'S | | INC |
| GULL, FRANKLIN'S | | INC |
| GULL, GLAUCOUS | | INC |
| GULL, GREAT BLK-BACK | | INC |
| GULL, HERRING | | INC |
| GULL, ICELAND | | INC |
| GULL, IVORY | | INC |
| GULL, LAUGHING | | INC |
| GULL, LESS BLK-BACK | | INC |
| GULL, LITTLE | | INC |

| COMMON NAME | MARKET CATEGORY | LOG |
|------------------------|-----------------|----------|
| GULL, MEW | | INC |
| GULL, NK | | INC |
| GULL, RING BILLED | | INC |
| GULL, ROSS'S | | INC |
| GULL, SABINE'S | | INC |
| GULL, THAYER'S | | INC |
| HADDOCK | | SPP |
| HAGFISH, ATLANTIC | | SPP |
| HAKE, BLUE | | SPP |
| HAKE, LONGFIN | | SPP |
| HAKE, NK | | SPP |
| HAKE, RED (LING) | | SPP |
| HAKE, RED/WHITE MIX | | SPP |
| HAKE, SILVER (WHITING) | | SPP |
| HAKE, SOUTHERN | | SPP |
| HAKE, SPOTTED | | SPP |
| HAKE, WHITE | | SPP |
| HALIBUT, ATLANTIC | | SPP |
| HALIBUT, GREENLAND | | SPP |
| HARVESTFISH | | SPP |
| HERRING, ATLANTIC | | SPP |
| HERRING, BLUEBACK | | SPP |
| HERRING, NK (SHAD) | | SPP |
| HOGCHOCKER | | SPP |
| HOGFISH | ATLANTIC | SPP |
| INVERTEBRATE, NK | | SPP |
| JACK, CREVALLE | | SPP |
| JACK, NK | | SPP |
| JAEGER, LONG TAILED | | INC |
| JAEGER, NK | | INC |
| JAEGER, PARASITIC | | INC |
| JAEGER, POMARINE | | INC |
| JAEGER, SOUTH POLAR | | INC |
| JELLYFISH, NK | | SPP |
| KINGFISH, GULF | | SPP |
| KINGFISH, NK | | SPP |
| KINGFISH, NORTHERN | | SPP |
| KINGFISH, SOUTHERN | | SPP |
| KITTIWAKE, BLK-LEGGD | | INC |
| LADYFISH | UNCLASSIFIED | SPP |
| LAMPREY, NK | | SPP |
| LAMPSELL, NK | | SPP |
| LANCETFISH, NK | | IAL |
| LANTERNFISH, NK | | SPP |
| LEATHERJACKET | | SPP |
| LIZARDFISH | | SPP |
| LOBSTER, AMERICAN | | SPP, CRU |
| LOOKDOWN | | SPP |
| LOON, ARCTICA | | INC |
| LOON, COMMON | | INC |
| LOON, NK | | INC |
| LOON, RED-THROATED | | INC |
| LOUVAR | | IAL |
| LUMPFISH | | SPP |

| COMMON NAME | MARKET CATEGORY | LOG |
|-------------------------------|-----------------|-----------|
| LUMPSUCKER, ATL SPNY | | SPP |
| MACKEREL, ATLANTIC | | SPP |
| MACKEREL, CHUB | | SPP |
| MACKEREL, FRIGATE | | IAL |
| MACKEREL, KING | | SPP, IAL* |
| MACKEREL, NK | | SPP |
| MACKEREL, SNAKE, NK | | SPP |
| MACKEREL, SPANISH | | SPP |
| MANATEE, WEST INDIAN | | INC |
| MARINE MAMMAL, NK | | INC |
| MARLIN, BLUE | ROUND | IAL |
| MARLIN, NK | ROUND | IAL |
| MARLIN, WHITE | ROUND | IAL |
| MENHADEN, ATLANTIC | | SPP |
| MERGANSER, NK | | INC |
| MOLA, NK | | IAL |
| MOLA, OCEAN SUNFISH | | IAL |
| MOLA, SHARPTAIL | | IAL |
| MOLA, SLENDER | | IAL |
| MOLLUSCA EGGS, NK | | SPP |
| MOLLUSK, NK | | SPP |
| MONKFISH (ANGLER, GOOSEFISH) | TAIL | SPP |
| MONKFISH (ANGLER, GOOSEFISH) | LIVER | SPP |
| MONKFISH (ANGLER, GOOSEFISH) | ROUND | SPP |
| MOONFISH, ATLANTIC | | SPP |
| MULLET, NK | | SPP |
| MULLET, STRIPED | | SPP |
| MUMMICHOG | | SPP |
| MURRE, NK | | INC |
| MURRE, THICK-BILLED | | INC |
| MURRE, THIN-BILLED | | INC |
| MUSSEL, NK | | SPP |
| NARWHAL | | INC |
| NEEDLEFISH, ATLANTIC | | IAL |
| NODDY, BROWN | | INC |
| NONE (UNKNOWN IN LEGACY DATA) | | SPP, IAL |
| OCEAN POUT | | SPP |
| OCTOPUS, NK | | SPP |
| OILFISH | | IAL |
| OPAH | | IAL |
| OYSTER, COMMON | | SPP |
| OYSTER, EUROPEAN FLAT | | SPP |
| PELAGIC FISH, NK | | IAL |
| PELICAN, BROWN | | INC |
| PERCH, SAND | | SPP |
| PERCH, WHITE | | SPP |
| PERCH, YELLOW | | SPP |
| PERIWINKLE, COMMON | | SPP |
| PERMIT | | SPP |
| PETREL, BERMUDA | | INC |
| PETREL, BLACK-CAPPED | | INC |
| PETREL, FEA'S | | INC |
| PETREL, SO-TRINIDAD | | INC |
| PHALAROPE, RED | | INC |

| COMMON NAME | MARKET CATEGORY | LOG |
|----------------------------|-----------------|-----|
| PHALAROPE, RED-NECKED | | INC |
| PIGFISH | | SPP |
| PILOTFISH | | SPP |
| PINFISH | | SPP |
| PINGER, ACTIVE | | IAL |
| PINGER, PASSIVE | | IAL |
| PIPEFISH/SEAHORSE,NK | | SPP |
| POLLOCK | | SPP |
| POMFRET, ATLANTIC | | SPP |
| POMFRET, BIGSCALE | | SPP |
| POMFRET, NK | | SPP |
| POMPANO, AFRICAN | | SPP |
| POMPANO, FLORIDA | | SPP |
| PORCUPINE FISH | | SPP |
| PORGY, NK | | SPP |
| PORGY, RED | | SPP |
| PORPOISE, HARBOR | | INC |
| PORPOISE/DOLPHIN, NK | | INC |
| PTERODROMA NK | | INC |
| PUFFER, NK (BURRFISH) | | SPP |
| PUFFER, NORTHERN | | SPP |
| PUFFIN, ATLANTIC | | INC |
| QUAHOG, HARD SHELL CLAM | | SPP |
| QUAHOG, OCEAN (BLACK CLAM) | | SPP |
| RAVEN, SEA | | SPP |
| RAY, BULLNOSE | | IAL |
| RAY, BUTTERFLY, NK | | IAL |
| RAY, BUTTERFLY, SMOOTH | | IAL |
| RAY, BUTTERFLY, SPINY | | IAL |
| RAY, COWNOSE | | IAL |
| RAY, DEVIL | | IAL |
| RAY, EAGLE, NK | | IAL |
| RAY, NK | | IAL |
| RAY, TORPEDO | | IAL |
| RAY,MANTA, ATLANTIC | | IAL |
| RAY,MANTA,NK | | IAL |
| RAZORBILL | | INC |
| REDFISH, NK (OCEAN PERCH) | | SPP |
| REMORA, NK | | SPP |
| RIBBONFISH, NK | | SPP |
| RIBBONFISH,POLKA-DOT | | SPP |
| RIBBONFISH,SCALLOPED | | SPP |
| ROCKLING, FOURBEARD | | SPP |
| ROCKWEED, NK | | SPP |
| ROSEFISH,BLACK BELLY | | SPP |
| ROUGHY, BIG | | SPP |
| ROUGHY, NK | | SPP |
| RUNNER, BLUE | | SPP |
| SAILFISH | | IAL |
| SALMON, ATLANTIC | | IAL |

| COMMON NAME | MARKET CATEGORY | LOG |
|-------------------------------------|-----------------|-----|
| SALMON, CHINOOK | | IAL |
| SALMON, COHO | | IAL |
| SALMON, NK | | IAL |
| SALMON, PINK | | IAL |
| SAND DOLLAR | | SPP |
| SAURY, ATLANTIC | | SPP |
| SCAD, BIGEYE | | SPP |
| SCAD, MACKEREL | | SPP |
| SCAD, ROUGH | | SPP |
| SCALLOP, BAY | | SPP |
| SCALLOP, CALICO | | SPP |
| SCALLOP, ICELANDIC | | SPP |
| SCALLOP, NK | | SPP |
| SCALLOP, SEA | | SPP |
| SCORPIONFISH, NK | | SPP |
| SCOTER, BLACK | | INC |
| SCOTER, NK | | INC |
| SCOTER, SURF | | INC |
| SCOTER, WHITE-WINGED | | INC |
| SCULPIN, LONGHORN | | SPP |
| SCULPIN, NK | | SPP |
| SCUP | | SPP |
| SEA BASS, BLACK | | SPP |
| SEA BASS, NK | | SPP |
| SEA CUCUMBER, NK | | SPP |
| SEA PANSY | | SPP |
| SEA PEN | | SPP |
| SEA POTATO | | SPP |
| SEA ROBIN, ARMORED | | SPP |
| SEA ROBIN, NK | ROUND | SPP |
| SEA ROBIN, NORTHERN | | SPP |
| SEA ROBIN, STRIPED | | SPP |
| SEA SQUIRT, NK | | SPP |
| SEA URCHIN, NK | | SPP |
| SEAL, BEARDED | | INC |
| SEAL, GRAY | | INC |
| SEAL, HARBOR | | INC |
| SEAL, HARP | | INC |
| SEAL, HOODED | | INC |
| SEAL, LARGA (SPOTTED) | | INC |
| SEAL, NK | | INC |
| SEAL, RIBBON | | INC |
| SEAL, RINGED | | INC |
| SEATROUT, NK | | SPP |
| SEATROUT, SPOTTED(SPOTTED WEAKFISH) | | SPP |
| SEAWEED, NK | | SPP |
| SHAD, AMERICAN | | SPP |
| SHAD, GIZZARD | | SPP |
| SHAD, HICKORY | | SPP |
| SHANNY, NK | | SPP |
| SHARK, ATL ANGEL | | IAL |
| SHARK, ATL SHARPNOSE | ROUND | IAL |
| SHARK, ATL SHARPNOSE | FINS | SPP |
| SHARK, BASKING | ROUND | IAL |

| COMMON NAME | MARKET CATEGORY | LOG |
|-----------------------------------|-------------------|-----|
| SHARK, BASKING | FINS | SPP |
| SHARK, BIGNOSE | ROUND | IAL |
| SHARK, BIGNOSE | FINS | SPP |
| SHARK, BLACK TIP | ROUND | IAL |
| SHARK, BLACK TIP | FINS | SPP |
| SHARK, BLUE (BLUE DOG) | ROUND | IAL |
| SHARK, BLUE (BLUE DOG) | FINS | SPP |
| SHARK, BULL | ROUND | IAL |
| SHARK, BULL | FINS | SPP |
| SHARK, CARCHARHIN,NK | ROUND | IAL |
| SHARK, CARCHARHIN,NK | FINS | SPP |
| SHARK, DUSKY | ROUND | IAL |
| SHARK, DUSKY | FINS | SPP |
| SHARK, FINETOOTH | ROUND | IAL |
| SHARK, HAMMERHEAD, GREAT | ROUND | IAL |
| SHARK, HAMMERHEAD, SCALLOPED | ROUND | IAL |
| SHARK, HAMMERHEAD, SCALLOPED | FINS | SPP |
| SHARK, HAMMERHEAD, SMOOTH | ROUND | IAL |
| SHARK, HAMMERHEAD, SMOOTH | FINS | SPP |
| SHARK, HAMMERHEAD,NK | ROUND | IAL |
| SHARK, HAMMERHEAD,NK | FINS | SPP |
| SHARK, LEMON | ROUND | IAL |
| SHARK, LEMON | FINS | SPP |
| SHARK, MAKO, LONGFIN | ROUND | IAL |
| SHARK, MAKO, LONGFIN | FINS | SPP |
| SHARK, MAKO, NK | ROUND | IAL |
| SHARK, MAKO, NK | CHUNKS | SPP |
| SHARK, MAKO, NK | FINS | SPP |
| SHARK, MAKO, SHORTFIN | ROUND | IAL |
| SHARK, MAKO, SHORTFIN | FINS | SPP |
| SHARK, NIGHT | ROUND | IAL |
| SHARK, NIGHT | FINS | SPP |
| SHARK, NK | ROUND | IAL |
| SHARK, NK | CHUNKS | SPP |
| SHARK, NK | FINS DRIED | SPP |
| SHARK, NK | FINS FRESH/FROZEN | SPP |
| SHARK, NURSE | ROUND | IAL |
| SHARK, NURSE | FINS | SPP |
| SHARK, OCEANIC WHITETIP | ROUND | IAL |
| SHARK, OCEANIC WHITETIP | FINS | SPP |
| SHARK, PELAGIC | ROUND | IAL |
| SHARK, PELAGIC | FINS | SPP |
| SHARK, PORBEAGLE (MACKEREL SHARK) | ROUND | IAL |
| SHARK, PORBEAGLE (MACKEREL SHARK) | FINS | SPP |
| SHARK, SAND TIGER | ROUND | IAL |
| SHARK, SAND TIGER | FINS | SPP |
| SHARK, SANDBAR (BROWN SHARK) | ROUND | IAL |
| SHARK, SANDBAR (BROWN SHARK) | FINS | SPP |
| SHARK, SILKY | ROUND | IAL |
| SHARK, SILKY | FINS | SPP |
| SHARK, SPINNER | ROUND | IAL |
| SHARK, SPINNER | FINS | SPP |
| SHARK, THRESHER | ROUND | IAL |
| SHARK, THRESHER | FINS | SPP |

| COMMON NAME | MARKET CATEGORY | LOG |
|---------------------------------|-----------------|-----|
| SHARK, THRESHER, BIGEYE | ROUND | IAL |
| SHARK, THRESHER, BIGEYE | FINS | SPP |
| SHARK, TIGER | ROUND | IAL |
| SHARK, TIGER | FINS | SPP |
| SHARK, WHITE | ROUND | IAL |
| SHARK, WHITE | FINS | SPP |
| SHEARWATER, AUDUBON'S | | INC |
| SHEARWATER, CORY'S | | INC |
| SHEARWATER, GREATER | | INC |
| SHEARWATER, LITTLE | | INC |
| SHEARWATER, MANX | | INC |
| SHEARWATER, NK | | INC |
| SHEARWATER, SOOTY | | INC |
| SHEEPSHEAD | ROUND | SPP |
| SHELL, NK | | SPP |
| SHELLFISH, NK | | SPP |
| SHRIMP, MANTIS | | SPP |
| SHRIMP, NK | | SPP |
| SHRIMP, PANDALID, NK (NORTHERN) | | SPP |
| SHRIMP, PENAID, NK (SOUTHERN) | | SPP |
| SHRIMP, ROYAL RED | | SPP |
| SHRIMP, SCARLET | | SPP |
| SHRIMP, SHORE, NK | | SPP |
| SILVERSIDE, ATLANTIC | | SPP |
| SILVERSIDE, NK | | SPP |
| SKATE, BARNDOR | | SPP |
| SKATE, BARNDOR | WINGS | SPP |
| SKATE, CLEARNOSE | | SPP |
| SKATE, CLEARNOSE | WINGS | SPP |
| SKATE, LITTLE | | SPP |
| SKATE, LITTLE | WINGS | SPP |
| SKATE, NK | | SPP |
| SKATE, NK | WINGS | SPP |
| SKATE, ROSETTTE | | SPP |
| SKATE, ROSETTTE | WINGS | SPP |
| SKATE, SMOOTH | | SPP |
| SKATE, SMOOTH | WINGS | SPP |
| SKATE, THORNY | | SPP |
| SKATE, THORNY | WINGS | SPP |
| SKATE, WINTER (BIG) | | SPP |
| SKATE, WINTER (BIG) | WINGS | SPP |
| SKIMMER, BLACK | | INC |
| SKUA, GREAT | | INC |
| SMELT, RAINBOW | | SPP |
| SNAIL, MOONSHHELL, NK | | SPP |
| SNAIL, NK | | SPP |
| SNAKEBLENNY | | SPP |
| SNAPPER, DOG | | SPP |
| SNAPPER, NK | | SPP |
| SNAPPER, RED | | SPP |
| SNAPPER, VERMILLION | UNCLASSIFIED | SPP |
| SNIFEFISH, LONGSPINE | | SPP |
| SNIFEFISH, NK | | SPP |
| SPADEFISH | | SPP |

| COMMON NAME | MARKET CATEGORY | LOG |
|----------------------------|-----------------------|-----|
| SPEARFISH, LONGBILL | | IAL |
| SPONGE, NK | | SPP |
| SPOT | | SPP |
| SQUID, ATL LONG-FIN | | SPP |
| SQUID, NK | | SPP |
| SQUID, SHORT-FIN | | SPP |
| SQUID, SHORT-FIN | ROUND, SMALL | SPP |
| SQUID, SHORT-FIN | ROUND, MEDIUM | SPP |
| SQUID, SHORT-FIN | ROUND, LARGE | SPP |
| SQUID, SHORT-FIN | TUBE, UNCLASSIFIED | SPP |
| SQUID, SHORT-FIN | TUBE, SMALL | SPP |
| SQUID, SHORT-FIN | TUBE, MEDIUM | SPP |
| SQUID, SHORT-FIN | TUBE, LARGE | SPP |
| SQUIRRELFISH, NK | | SPP |
| STARFISH, BRITTLE,NK | | SPP |
| STARFISH, SEASTAR,NK | | SPP |
| STARGAZER, NK | | SPP |
| STINGRAY, ATLANTIC | | IAL |
| STINGRAY, BLUNTNOSE | | IAL |
| STINGRAY, NK | | IAL |
| STINGRAY, PELAGIC | | IAL |
| STINGRAY, ROUGHTAIL | | IAL |
| STOMACH CONTENTS EMPTY | | SPP |
| STOMACH CONTENTS FISH, NK | | SPP |
| STOMACH CONTENTS UNID | | SPP |
| STOMACH CONTENTS, INVT, NK | | SPP |
| STORM PETREL, BAND-R | | INC |
| STORM PETREL, LEACHS | | INC |
| STORM PETREL, NK | | INC |
| STORM PETREL, WHITE-FACED | | INC |
| STORM PETREL, WILSON | | INC |
| STURGEON, ATLANTIC | | IAL |
| STURGEON, NK | | IAL |
| STURGEON, SHORT-NOSE | | IAL |
| SUCKER, FRESHWATER, NK | | SPP |
| SUNFISH, FRESHWATER,NK | | SPP |
| SWORDFISH | GUTTED | IAL |
| SWORDFISH | LARGE (100-199 LBS) | IAL |
| SWORDFISH | MEDIUM (50-99 LBS) | IAL |
| SWORDFISH | SMALL (26-49 LBS) | IAL |
| SWORDFISH | RATS (0-25 LBS) | IAL |
| SWORDFISH | DBL MARK(200-299LBS) | IAL |
| SWORDFISH | TRIPL MARK (300 LBS+) | IAL |
| SWORDFISH | CHUNKS | IAL |
| SWORDFISH | ROUND | IAL |
| TARPON | | IAL |
| TAUTOG (BLACKFISH) | | SPP |
| TERN, ARCTIC | | INC |
| TERN, BLACK | | INC |
| TERN, BRIDLED | | INC |
| TERN, CASPIAN | | INC |
| TERN, COMMON | | INC |
| TERN, FORSTER'S | | INC |
| TERN, GULL-BILLED | | INC |

| COMMON NAME | MARKET CATEGORY | LOG |
|---------------------------------|-----------------------|-----------|
| TERN, LITTLE | | INC |
| TERN, NK | | INC |
| TERN, ROSEATE | | INC |
| TERN, ROYAL | | INC |
| TERN, SANDWICH | | INC |
| TERN, SOOTY | | INC |
| TILEFISH | | SPP |
| TILEFISH, BLUELINE | ROUND | SPP |
| TILEFISH, GOLDEN | UNCLASSIFIED | SPP |
| TOADFISH, NK | | SPP |
| TOADFISH, OYSTER | | SPP |
| TOMCOD, ATLANTIC | | SPP |
| TRIGGERFISH, NK (LEATHERJACKET) | | SPP |
| TRIPLETAIL | | IAL |
| TROPICBIRD, NK | | INC |
| TROPICBIRD, RED-BILLED | | INC |
| TROPICBIRD, WH-TAILD | | INC |
| TROUT, STEELHEAD | | IAL |
| TUNA, ALBACORE | DRESSED | IAL |
| TUNA, ALBACORE | ROUND | IAL |
| TUNA, ALBACORE | CHUNKS | SPP |
| TUNA, BIG EYE | ROUND | IAL |
| TUNA, BIG EYE | CHUNKS | SPP |
| TUNA, BLACKFIN | ROUND | IAL |
| TUNA, BLACKFIN | CHUNKS | SPP |
| TUNA, BLUEFIN | ROUND | IAL |
| TUNA, BLUEFIN | GIANTS 310 LBS + | IAL |
| TUNA, BLUEFIN | SCHOOLIES 14-134 LBS | IAL |
| TUNA, BLUEFIN | YOUNG SCHOOL < 13 LBS | IAL |
| TUNA, BLUEFIN | MEDIUM 135-309 LBS | IAL |
| TUNA, BLUEFIN | CHUNKS | SPP |
| TUNA, LITTLE (FALSE ALBACORE) | ROUND | IAL, SPP* |
| TUNA, LITTLE (FALSE ALBACORE) | CHUNKS | SPP |
| TUNA, NK | ROUND | IAL |
| TUNA, NK | CHUNKS | SPP |
| TUNA, SKIPJACK | ROUND | IAL, SPP* |
| TUNA, SKIPJACK | CHUNKS | SPP |
| TUNA, YELLOWFIN | ROUND | IAL |
| TUNA, YELLOWFIN | CHUNKS | SPP |
| TURTLE, GREEN | | INC |
| TURTLE, HAWKSBILL | | INC |
| TURTLE, KEMP'S RIDLEY | | INC |
| TURTLE, LEATHERBACK | | INC |
| TURTLE, LOGGERHEAD | | INC |
| TURTLE, NK | | INC |
| TURTLE, OLIVE RIDLEY | | INC |
| TURTLE, SLIDER, POND | | INC |
| TURTLE, SNAPPER | | INC |
| TURTLE, TERRAPIN | | IAL |
| UNKOWN LIVING MATTER | | SPP |
| WAHOO | | IAL |
| WALRUS | | INC |
| WEAKFISH (SQUETEAGUE SEA TROUT) | | SPP |
| WHALE, BALEEN, NK | | INC |

| COMMON NAME | MARKET CATEGORY | LOG |
|---------------------------------|-----------------|-----|
| WHALE, BELUGA | | INC |
| WHALE, BK, BOTTLENOSE | | INC |
| WHALE, BK, CUVIER'S | | INC |
| WHALE, BK, DENSE | | INC |
| WHALE, BK, GERVAIS' | | INC |
| WHALE, BK, MESOP, NK | | INC |
| WHALE, BK, SOWERBY'S | | INC |
| WHALE, BK, TRUE'S | | INC |
| WHALE, BLUE | | INC |
| WHALE, BRYDE'S | | INC |
| WHALE, DWARF SPERM | | INC |
| WHALE, FALSE KILLER | | INC |
| WHALE, FIN/SEI | | INC |
| WHALE, FINBACK | | INC |
| WHALE, HUMPBACK | | INC |
| WHALE, KILLER | | INC |
| WHALE, MELON-HEADED | | INC |
| WHALE, MINKE | | INC |
| WHALE, NK | | INC |
| WHALE, PILOT, LONG-FIN | | INC |
| WHALE, PILOT, NK | | INC |
| WHALE, PILOT, SHORT-FIN | | INC |
| WHALE, PYGMY KILLER | | INC |
| WHALE, PYGMY SPERM | | INC |
| WHALE, RIGHT, NO | | INC |
| WHALE, SEI | | INC |
| WHALE, SPERM | | INC |
| WHALE, TOOTHED, NK | | INC |
| WHELK, CHANNELED (SMOOTH) | | SPP |
| WHELK, KNOBBED | | SPP |
| WHELK, LIGHTNING | | SPP |
| WHELK, NK, CONCH | | SPP |
| WHITING, BLACK (HAKE, OFFSHORE) | ROUND | SPP |
| WOLFFISH, ATLANTIC | | SPP |
| WOLFFISH, NORTHERN | | SPP |
| WORM, BLOOD | | SPP |
| WORM, NK | | SPP |
| WRECKFISH | | IAL |
| WRYMOUTH | | SPP |

OBSIG = Sighting Log

OBIAL = Individual Animal Log

OBINC = Incidental Take Log

OBSP = Species Section of Haul Log

* For these species, record each animal individually on the Individual Animal Log when possible. In fisheries, such as gillnet, where these species are targeted or where large quantities of these animals come up in the gear, these animals may be summarized by haul on the Species Section of the Haul Log.

NOTES: The same animal should not be recorded on both the Individual Animal Log and the Species Section of the Haul Log unless the vessel is landing dressed parts. In that case, the animal parts, such as shark fins or tuna chunks may be summarized by haul on the Species Section of the Haul Log and the carcasses recorded on the Individual Animal Log.

For fisheries such as pelagic drift gillnet and pelagic longline that target large pelagic fish, everything (except incidental takes and parts of fish, *i.e.* chunks) hauled back in the gear should be recorded individually on the Individual Animal Log.

DEALER LIST - Sorted by State, Dealer Name, City**CONNECTICUT**

| | |
|---------------------------------|----------------|
| BRIDGEPORT LOBSTER & SHELLFISH | BRIDGEPORT |
| CALVIN CHI | COS COB |
| COVE FISH MARKET INC | MYSTIC |
| GAMBARDELLA WHLSE FISH DLR INC | EAST HAVEN |
| GARBO LOBSTER CO | GROTON |
| GURCHIK ENTERPRISES LLC | NEW LONDON |
| LADY LYNN | STONINGTON |
| LIVELY LOBSTER LLC | BRIDGEPORT |
| NEW LONDON SEAFOOD DISTRIBUTORS | NEW LONDON |
| SEA WELL SEAFOOD | PAWCATUCK |
| SFD UNLIMITED INC | PAWACATUCK |
| STEVEN BURT SEAFOOD | EAST NORWALK |
| STONINGTON FILLET CO INC | STONINGTON |
| STONINGTON FISH & LOBSTER | STONINGTON |
| STONINGTON FISHERMAN'S DOCK | STONINGTON |
| STONINGTON SEAFOOD HARVESTERS | STONINGTON |
| SUPERIOR SCALLOPS | POMFRET CENTER |

DELEWARE

| | |
|-------------------------------|------------|
| F/V ANDREW INC | DAGSBORO |
| LEWES FISHHOUSE & PRODUCE INC | LEWES |
| OCEAN FRESH SEAFOOD | HARRINGTON |
| SEA WATCH INTERNATIONAL LTD | MILFORD |

MAINE

| | |
|-------------------------------|-----------------|
| A & S TRUCKING INC | TENANTS HARBOR |
| A C INC | BEALS |
| ADAMS BAIT & TRANSPORT CO | MONROE |
| AL RYAN INC | FREEPORT |
| ALEWIVE'S BROOK FARM | CAPE ELIZABETH |
| ALFIERO BROS SEAFOOD | AUBURN |
| AL'S SEAFOOD/ALLAN R MERCHANT | JONESPORT |
| ATLANTIC EDGE LOBSTER INC | BOOTHBAY HARBOR |
| ATLANTIC FRESH SEAFOOD INC | CANAAN |
| ATLANTIC SHELLFISH | JONESPORT |
| ATWOODS SEAFOOD | AUBURN |
| B B S LOBSTER CO INC | BUCKS HARBOR |
| BAR HARBOR MARINE | TRENTON |
| BARBARA STEVENSON | PORTLAND |
| BATH CANNING | BATH |

MAINE (CONTINUED)

| | |
|--------------------------------|-----------------|
| BAYLEY'S LOBSTER POUND | SCARBOROUGH |
| BEALS JONESPORT CO-OP INC | JONESPORT |
| BEALS LOBSTER CO INC | JONESPORT |
| BEDROCK LOBSTER POUND | KITTERY |
| BILL FREEMAN COMMERCIAL SER | TRENTON |
| BOLD VENTURES INC | STONINGTON |
| BOOTHBAY REGION LOBSTERMEN INC | BOOTHBAY HARBOR |
| BREMEN LOBSTER POUND CO-OP INC | BREMEN |
| BRISTOL SEAFOOD INC | PORTLAND |
| BROWNE TRADING COMPANY | PORTLAND |
| C H RICH CO INC | BASS HARBOR |
| CARVER SHELLFISH INC | BEALS |
| CHRISSY D LOBSTER CO | KITTERY |
| CNW SEAFOOD | BUCKS HARBOR |
| COD END | TENANTS HARBOR |
| COLWELL BROS INC | DEER ISLE |
| CONARY COVE LOBSTER CO | DEER ISLE |
| COOKS LOBSTER HOUSE INC | BAILEY ISLAND |
| COREA LOBSTER CO-OP INC | COREA |
| CRANBERRY ISLES FISHRMN'S COOP | ISLESFORD |
| CUMMINGS LOBSTER CO INC | KENNEBUNK |
| CUNDY'S HARBOR WHARF | HARPSWELL |
| CUPP FAMILY GARDNE CENTER | KENNEBUNK |
| CUSHING SHELLFISH COMPANY | ROCKLAND |
| CUSTOM HOUSE SEAFOODS INC | PORTLAND |
| D & D SEAFOOD INC | DEER ISLE |
| D & S LOBSTER BAIT | BEALS |
| D C AIR & SEAFOOD INC | WINTER HARBOR |
| DANIEL H HARRIAMAN | CAPE ELIZABETH |
| DANIEL KALER & SONS INC | BOOTHBAY |
| DICK'S LOBSTERS | SOUTH HARPSWELL |
| DOUBLE V INC | YARMOUTH |
| DOUTY BROS INC | PORTLAND |
| DYERS BAY LOBSTER CO INC | STEUBEN |
| EAST BAY LOBSTERS | BEALS |
| EMERY'S LOBSTER BAIT | KITTERY |
| EUGLEY'S WHARF INC | SOUTH BRISTOL |
| FARRIN'S WHARF | WALPOLE |
| FEYLER'S FISHTAILS | CUSHING |
| FIFIELD LOBSTER CO | STONINGTON |
| FINASTKIND FISH MARKET INC | WALDOBORO |
| FISHERMAN'S CATCH SFD MKT INC | DAMARISCOTTA |
| FISHERMEN'S HERITGE LBSTR COOP | FRIENDSHIP |
| FISHERMEN'S LANDING INC | BAR HARBOR |

MAINE (CONTINUED)

| | |
|------------------------------|------------------|
| FISHERMENS NET WBC INC | PORTLAND |
| FREE RANGE FISH | PORTLAND |
| FRESH PACK SEAFOOD | WISCASSET |
| FRIENDSHIP LOBSTER CO-OP | FRIENDSHIP |
| G T MANAGEMENT INC | SCARBOROUGH |
| GEORGETOWN FISHERMEN'S CO-OP | GEORGETOWN |
| GILLISON SEAFOOD | SOUTH BRISTOL |
| GLEN'S LOBSTER'S | BAILEY ISLAND |
| GOBEIL BAIT | BIDDEFORD |
| H R BEAL & SONS INC | SOUTHWEST HARBOR |
| HARRASEEKET LOBSTER CO | SOUTH FREEPORT |
| HATCHET COVE LOBSTER | FRIENDSHIP |
| HEIDI TODD | FREEPORT |
| HIXEY HEAD LOBSTER POUND INC | BEALS |
| ICEBRAND FOODS INC | PORTLAND |
| INGRID BENGIS SEAFOOD | STONINGTON |
| INLAND LOBSTER | VINALHAVEN |
| INTERSTATE LOBSTER INC | HARPSWELL |
| ISF TRADING INC | PORTLAND |
| ISLAND FISH COMPANY | MONHEGAN ISLAND |
| ISLAND SEAFOOD | DEER ISLE |
| ISLAND SEAFOOD INC | KITTERY |
| ISLE AU HAUT LOBSTERMAN'S | ISLE AU HAUT |
| J & J SONS LOBSTER BAIT | BEALS |
| J & K LOBSTER BAIT INC | HARRINGTON |
| J P SHELLFISH INC | ELIOT |
| JESS'S MKT INC | ROCKLAND |
| JSSR ENTERPRISES | BOOTHBAY |
| KELLEY LOBSTER CO | STEUBEN |
| KEN PETERSON FISH BROKER | PORTLAND |
| KEN'S LOBSTER | HARPSWELL |
| KIP'S SEAFOOD COMPANY | CUSHING |
| KITTERY LOBSTER CO INC | KITTERY |
| L & L LOBSTER CO INC | ROCKLAND |
| LANGSFORD RD LOBSTER & FISH | KENNEBUNKPORT |
| LASH LOBSTER WHARF INC | FRIENDSHIP |
| LAWRENCE E ALLEY | STEUBEN |
| LITTLE RIVER LOBSTER CO | EAST BOOTHBAY |
| LOBSTER OUTLET | WOOLWICH |
| LOOK'S CANNING COMPANY | WHITING |
| MAD FISH INC | SCARBORO |
| MAINE COAST SEAFOOD | SPRUCE HEAD |
| MAINE LOBSTER OUTLET | KITTERY |
| MAINE MARICULTURE | S. BRISTON |
| MAINE SEAFOOD SPECIALTIES | BIDDEFORD |

MAINE (CONTINUED)

| | |
|-------------------------------|----------------------|
| MAINE SHELLFISH COMPANY INC | ELLSWORTH |
| MAINE'S BEST SEAFOOD INC | BROOKLIN |
| MARSH COVE LOBSTER CO INC | ADDISON |
| MCALENEYS NEW MEADOWS LOBSTER | PORTLAND |
| MEDOMAK SHELLFISH INC | BREMEN |
| MIDDLEBAY LOBSTER | HARPSWELL |
| MILL COVE LOBSTER POUND | BOOTHBAY HARBOR |
| MOOSABEC MUSSELS INC | JONESPORT |
| MORNINGSTAR SEAFOOD | STONINGTON |
| MORRISONS LOBSTERS | KITTERY |
| MTS SEAFOOD TRADING CO LLC | FALMOUTH |
| MY LADY INC | STONINGTON |
| NANCY'S SHELLFISH INC | FALMOUTH |
| NEW ERA FISH LLC | PORTLAND |
| NEW HARBOR CO-OP | NEW HARBOR |
| NEW MEADOW LOBSTER | PORTLAND |
| NORTH ATLANTIC INC | PORTLAND |
| NORTH ATLANTIC LOBSTER SALES | ADDISON |
| NORTH ATLANTIC PRODUCTS INC | ROCKLAND |
| NORTH END LOBSTER CO-OP | WESTPORT |
| NORTHEASTERN SEAFOOD INC | SOUTHWEST HARBOR |
| OAK ISLAND SEAFOOD INC | ROCKLAND |
| OCEAN'S HARVEST SEAFOOD | EDMUNDS |
| OLD SALT SEAFOOD | BEALS |
| PARSONS' LOBSTER | BAR HARBOR |
| PEMAQUID FISHERMEN'S COOP | PEMAQUID |
| PERIO POINT SEAFOOD | BEALS |
| PHILLBRICK BROS INC | OWLS HEAD |
| PORT LOBSTER CO INC | KENNEBUNKPORT |
| PORTLAND FISH EXCHANGE | PORTLAND |
| PORTLAND LOBSTER POUND INC | PORTLAND |
| PURSE LINE BAIT | SEBASCO |
| R & R SEAFOOD | BRISTOL |
| REILLY'S SEA PRODUCTS | SOUTH BRISTOL |
| RESOURCE TRADING COMPANY | PORTLAND |
| RIVER CATCH INC | PORTLAND |
| ROBINSON'S WHARF INC | WEST BOOTHBAY HARBOR |
| ROEBOAT ENTERPRISES | BOOTHBAY HARBOR |
| ROUND POND LOBSTER | ROUND POND |
| SAINT GEORGE MARINE | PORT CLYDE |
| SAMS SEAFOOD | CUSHING |
| SARDINE SUE | KITTERY |
| SEA FRESH USA INC. | PORTLAND |
| SEA PIER INC | BOOTHBAY HARBOR |
| SEAHORSE LOBSTER & FISH | SEBASCO ESATES |

MAINE (CONTINUED)

| | |
|--------------------------------|-----------------|
| SEASIDE FISH & LOBSTER INC | WEST POINT |
| SEAVIEW FISHERIES INC | KITTERY |
| SEBASCO WHARF INC | SEBASCO ESTATES |
| SHARE FRESH SEAFOOD | HARRINGTON |
| SHAW'S FISH & LOBSTER | NEW HARBOR |
| SIMMONS LOBSTER WHARF | FRIENDSHIP |
| SIMPSON'S OCEANFRESH SFD INC | WISCASSET |
| SMALL POINT FISHERIES II | PHIPPSBURG |
| SMITH'S LOBSTER | JONESPORT |
| SOLAR SEAFOOD INC | WESTBROOK |
| SORRENTO LOBSTER INC | SORRENTO |
| SOUTH BRISTOL FISHERMEN'S COOP | SOUTH BRISTOL |
| SPRUCE HEAD FISHERMEN'S CO-OP | SOUTH THOMASTON |
| STINSON MARINE LLC | BATH |
| STINSON SEAFOOD 2001 INC | PROSPECT HARBOR |
| STONINGTON LOBSTER CO-OP | STONINGTON |
| STONINGTON SEA PRODUCTS INC | STONINGTON |
| STONINGTON SEAFOOD EXPRESS | STONINGTON |
| SUNSHINE SEAFOOD INC | STONINGTON |
| SWANS ISLAND FISHERMAN'S CO-OP | SWANS ISLAND |
| T P S INDUSTRIES | WEST JONESPORT |
| THOMAS J KEZAR INC | CAPE PORPOISE |
| THOMAS MASSEY LTD | SOUTH BRISTOL |
| THOMAS W CASAMASSA | SACO |
| THREE SONS FISHING | FALMOUTH |
| UNDER WATER TAXI | SWANS ISLAND |
| UPSTREAM TRUCKING INC | PORTLAND |
| VINALHAVEN FISHERMEN'S CO-OP | VINALHAVEN |
| VITKUS LOBSTER COMPANY | CAMDEN |
| WARD BAIT CO | KENNEBUNKPORT |
| WAYNE R PARRY INC | ARUNDEL |
| WEATHERVANE SEAFOODS INC | KITTERY |
| WEBER SEAFOOD INC | PORTLAND |
| WEST BAY FISHING INC | GOULDSBORO |
| WEST BROS LOBSTER INC | STEUBEN |
| WILLIAM ATWOOD LOBSTER CO | SPRUCE HEAD |
| WINTER HARBOR CO-OP INC | WINTER HARBOR |
| WOTTON LOBSTER INC | NAGS HEAD |
| YORK RIVER LOBSTER CO | YORK |
| YOUNG'S LOBSTER POUND | BELFAST |

MARYLAND

| | |
|--------------------------|------------|
| BLUE WATER FISHERIES INC | OCEAN CITY |
| COLBOURNE SEAFOOD INC | SECRETARY |

MARYLAND (CONTINUED)

CRABKNOCKERS SEAFOOD MARKET
 GOODWIN SEAFOODS
 J + J WHOLESALE INC.
 JANIS SMYLY
 JIMMY CANTLER'S RIVDE INN INC
 MARTIN FISH CO INC
 MID-ATLANTIC FOODS INC
 NAFCO
 OCEAN CITY FISH CO
 QUALITY SEAFOOD INC
 SEAHAWK
 SOUTHERN CONNECTION SEAFOOD

LEONARDTOWN
 UNKNOWN
 ROCK HALL
 BRYANTOWN
 ANNAPOLIS
 OCEAN CITY
 POCOMOKE CITY
 JESSUP
 WEST OCEAN CITY
 FORT WASHINGTON
 SILVER SPRINGS
 CRISFIELD

MASSACHUSETTS

4TH CLIFF SEAFOOD
 A & A SEAFOOD INC
 A M L INTERNATIONAL
 AARON CEBULA
 ABRAMO FISH CO LTD
 AFC TRADING CORP
 ALIVE & KICKING LOBSTER'S
 AMERICAN SFDS PROCESSING LLC
 ANGLERS FISHERIES INC
 ATLANTIC COAST FISHERIES CORP
 ATLANTIC COAST SEAFOOD INC
 ATLANTIC GEM SFD
 ATLANTIC SEA COVE INC
 B & M FISH CO LLC
 BAYSIDE SEAFOOD CORP
 BERGIE'S SEAFOOD INC
 BERGLES
 BIG G SEAFOOD INC
 BOATHOUSE FISH MARKET
 BOSTON CRAB CO INC
 BOSTON WHOLESALE LOBSTER CORP
 BREAD & CIRCUS WHOLE FOODS MKT
 BREAKWATER FISH & LOBSTER CO
 BUZZARDS BAY SEAFOOD INC
 BUZZARDS BAY TRADING CO INC
 C & C SEAFOOD
 CAHOON & SONS FISHERIES
 CANAL MARINE FISHERIES INC
 CANYON SFD INTERN'L CORP
 CAPE ANN SEAFOODS INC

MARSHFIELD
 FAIRHAVEN
 SOUTHBORO
 FAIRHAVEN
 BOSTON
 FAIRHAVEN
 CAMBRIDGE
 NEW BEDFORD
 NEW BEDFORD
 NEW BEDFORD
 BOSTON
 NEW BEDFORD
 BOSTON
 BOSTON
 NEW BEDFORD
 NEW BEDFORD
 NEW BEDFORD
 NEW BEDFORD
 WELLFLEET
 BOSTON
 LYNN
 GLOUCESTER
 BREWSTER
 FAIRHAVEN
 NEW BEDFORD
 MARBLEHEAD
 WEST YARMOUTH
 SANDWICH
 NEW BEDFORD
 GLOUCESTER

MASSACHUSETTS (CONTINUED)

| | |
|-------------------------------|---------------|
| CAPE ANN TUNA | GLOUCESTER |
| CAPE COD BAY FISHERIES | PROVINCETOWN |
| CAPE FISH & LOBSTER CO INC | CENTERVILLE |
| CAPE QUALITY BLUEFIN | SOUTH DENNIS |
| CAPE SCALLOP & SEAFOOD | CARVER |
| CAPE SEAFOODS INC | GLOUCESTER |
| CAPE SHARK CHOWDER | GLOUCESTER |
| CAPE SHARK FISHERIES | GLOUCESTER |
| CAPE SPRAY FISHERIES | HYANNIS |
| CAPE TIP SEAFOODS INC | PROVINCETOWN |
| CAPT JOE & SONS INC | GLOUCESTER |
| CAPT VINCE INC | GLOUCESTER |
| CARLOS SEAFOOD INC | NEW BEDFORD |
| CAROL AND SHERRY | WELLFLEET |
| CHANNEL FISH CO INC | EAST BOSTON |
| CHATAM SEAFOOD COOPERATIVE | CHATHAM |
| CHATHAM FISH & LOBSTER CO INC | S CHATHAM |
| CHATHAM WEIRS INC | S CHATHAM |
| CHATHAMS FINEST SEAFOOD | WEST CHATHAM |
| CHERRY ST FISH MKT | DANVERS |
| COLD ATLANTIC SEAFOOD INC | NEW BEDFORD |
| COMMERCIAL LOBSTER CO INC | BOSTON |
| COTE FISHERIES INC | MILTON |
| COUGAR SEAFOOD CORPORATION | NEW BEDFORD |
| D J SEAFOOD INC | MARION |
| DAVE'S SEAFOOD INC | MILTON |
| DAVIDS FISH MARKET INC | SALISBURY |
| D-FILLET CO INC | NEW BEDFORD |
| DIMARE SEAFOODS CO INC | REVERE |
| DOCKSIDE FISHERIES INC | WESTPORT |
| EAST COAST SEAFOOD INC | LYNN |
| EASTERN FISHERIES INC | NEW BEDFORD |
| EASTERN SHORE SEAFOOD | ESSEX |
| EDGARTOWN SEAFOOD INC | EDGARTOWN |
| F J O'HARA & SONS INC | BOSTON |
| F W F INC | MILTON |
| FAIR TIDE SHELLFISH LTD | NEW BEDFORD |
| FAIRWAY FISH CO INC | FAIRHAVEN |
| FALMOUTH FISH MARKET | EAST FALMOUTH |
| FAMILY FISHERIES LTD | NEW BEDFORD |
| FERRY HILL FISHERIES INC | MARSHFIELD |
| FISH ON WHEELS | BOSTON |
| FISHERMENS DISPLAY AUCTION | NEW BEDFORD |
| FISHERMENS WHARF MARINA | PROVINCETOWN |
| FISHQUEST | FAIRHAVEN |

MASSACHUSETTS (CONTINUED)

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| FLEET FISHERIES INC | FAIRHAVEN |
| FLEET FISHERIES INC. | NEW BEDFORD |
| FRESH WATER FISH COINC | BOSTON |
| FUJI INVESTMENT USA INC | HAMILTON |
| FULFORD FISH | GLOUCESTER |
| GLIDDEN'S ISLAND SEAFOOD INC | NANTUCKET |
| GLOUCESTER FISH EXCHANGE INC | GLOUCESTER |
| GLOUCESTER SEAFOOD DISPLAY AUCTION | GLOUCESTER |
| GREAT EASTERN SEAFOOD INC | BOSTON |
| GREGS LOBSTER CO INC | HARWICHPORT |
| H&M FISHERIES INC | WESTPORT |
| HANOVER LOBSTER & SEAFOOD | HANOVER |
| HARBOR SEAFOODS INT'L INC | GLOUCESTER |
| HARVESTER SEAFOOD & SHELLFISH | BUZZARDS BAY |
| HATCH'S FISH MARKET INC | WELLFLEET |
| HI HO SEAFOOD INC | MARSTON MILLS |
| HILTONS FISHING DOCK | NEWBURYPORT |
| HYGRADE OCEAN PRODUCTS INC | NEW BEDFORD |
| IDEAL SEAFOOD INC | BOSTON |
| INTERNATIONAL C FOOD, INC | FALL RIVER |
| INTERSHELL SEAFOOD COMPANY | GLOUCESTER |
| IPSWICH SHELLFISH CO INC | IPSWICH |
| J T SEA PRODUCTS INC | NORTH DARTMOUTH |
| JAMES BAY TRADING CO INC | WESTPORT |
| JEWELS SEAFOOD INC | NEW BEDFORD |
| JO-AN-HA FISHERIES INC | NEW BEDFORD |
| JOE'S LOBSTER MART INC | SANDWICH |
| JOHN B WRIGHT FISH CO INC | GLOUCESTER |
| JOHN NAGLE CO | BOSTON |
| JO-JA SERVICE CORP | ACUSHNET |
| JOLIN LOBSTER INC | MANCHESTER |
| K & F FISH | EAST SANDWICH |
| KIMBALL FAMILY CORP | PLYMOUTH |
| L & L SEAFOOD | UNKNOWN |
| L A L | GLOUCESTER |
| LARSEN'S FISH MARKET INC | CHILMARK |
| LEES WHARF LOBSTER INC | WESTPORT POINT |
| LIBBYS | FALMOUTH |
| LISBON SEAFOOD COMPANY | FALL RIVER |
| LIVE LOBSTER COMPANY INC | CHELSEA |
| LJ FISH | UNKNOWN |
| LOBSTER ALFREDO | WHITMAN |
| LOBSTER TRAP CO INC | BOURNE |
| LOTZZO'S FISH INC | WESTPORT |
| LOU-JOE'S | ACUSHNET |

MASSACHUSETTS (CONTINUED)

| | |
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| M & B SEA PRODUCTS | NEW BEDFORD |
| M & J SEAFOOD | NEW BEDFORD |
| M B SEAFOOD INC | NEW BEDFORD |
| M F FOLEY INC NEW BEDFORD | NEW BEDFORD |
| M MORTILLARO'S BOAT SHOP INC | NEW BEDFORD |
| MACLEAN'S SEAFOOD | NEW BEDFORD |
| MAGURO AMERICA INC | SOUTH CHATHAM |
| MANCHESTER LOBSTER INC | MANCHESTER |
| MANOMET LOBSTER POUND LLC | MANOMET |
| MARBLEHEAD LOBSTER | MARBLEHEAD |
| MARDER TRAWLING INC | NEW BEDFORD |
| MARTHA'S VINEYARD SFD GRP INC | VINEYARD HAVEN |
| MENEMSHA BASIN SEAFOOD | VINEYARD HAVEN |
| MET FISHERIES | NEW BEDFORD |
| MICHAEL N GALGANA | QUINCY |
| MORTILLARO LOBSTER LLC | GLOUCESTER |
| MULLANEY'S HARBORSIDE FISH | SCITUATE |
| NANTUCKET FISH COMPANY INC | SOUTH DENNIS |
| NANTUCKET SEAFOOD | NANTUCKET |
| NEBULA FOODS INC1 | NEW BEDFORD |
| NEW ENGLAND FISH EXCHANGE | BOSTON |
| NEW ENGLAND FRESH SEA PROD INC | GLOUCESTER |
| NEW ENGND MARINE RESOURCES INC | GLOUCESTER |
| NEW HORIZON SEA FOODS | PROVINCETOWN |
| NORDSTROM TRADING CO INC | MATTAPOISETT |
| NORTH ATLANTIC LOBSETER | DANVERS |
| NORTH ATLANTIC TRADERS LTD | MARBLEHEAD |
| NORTH COAST SEAFOODS | BOSTON |
| NORTHERN EDGE SEAFOOD INC | S DARTMOUTH |
| NORTHERN PELAGIC GROUP LLC | NEW BEDFORD |
| NORTHERN WIND INC | NEW BEDFORD |
| OCEAN CREST SEAFOODS INC | GLOUCESTER |
| OCEAN OBSESSION LTD | NEW BEDFORD |
| OCEAN STAR SEAFOOD | SOUTH BOSTON |
| OCEAN WIND FISHERIES INC | NEW BEDFORD |
| OCEANIC SEAFOOD | SOUTH DARTMOUTH |
| OLD SQUAW FISH CO | NEWBURY |
| PACIFIC TRADE INC | QUINCY |
| PALMERS ISLAND SEAFOOD | SOUTH DARTMOUTH |
| PIER 7 INC | BOSTON |
| PIGEON COVE FISHERMAN'S COOP | ROCKPORT |
| PIGEON COVER WHOLE FOODS CO. | GLOUCESTER |
| POOLE'S FISH INC | CHILMARK |
| PORTLAND SHELLFISH SALES INC | MARBLEHEAD |

MASSACHUSETTS (CONTINUED)

| | |
|--------------------------------|----------------|
| PURITAN FISH CO INC | BOSTON |
| RAW SEAFOOD INC | NEW BEDFORD |
| RCC FOODS | FAIRHAVEN |
| RED STARR SEAFOOD INC | NEW BEDFORD |
| RELIABLE FISH CO INC | PLYMOUTH |
| ROBERT HARTIGAN | NEWBURYPORT |
| ROBERT WALSH | MEDFORD |
| ROCKY BOTTOM FISH COMPANY | SOUTH YARMOUTH |
| ROLAND SEAFOOD | UNKNOWN |
| ROWAND FISHERIES INC | BEVERLY |
| S PARISI & SONS SEAFOODS INC | GLOUCESTER |
| SAM'S SEAFOOD INC | HINGHAM |
| SASHAMY SEAFOOD SPECIALTS INC | BOSTON |
| SAYLE & HENRY INC | NANTUCKET |
| SEA COAST SEAFOOD | NEW BEDFORD |
| SEA FRESH OF NEW BEDFORD | NEW BEDFORD |
| SEA QUEST | UNKNOWN |
| SEA STAR FISHERIES CORP | GLOUCESTER |
| SEA TO YOU BOSTON INC | BOSTON |
| SEAFOOD CONUSLT & ANALYSIS INC | NEW BEDFORD |
| SEAHORSE SEAFOODS CO INC | MARION |
| SEAPORT ASSOCIATES INC | PROVINCETOWN |
| SECONDO FAMILY ENTR INC | PLYMOUTH |
| SHAMROCK SEAFOOD LLC | NEW BEDFORD |
| SHORTLINE FISH CO INC | TRURO |
| SIX PACK SEAFOODS | ACUSHNET |
| SNELDERS TRUCKING | SCITUATE |
| SNUG HARBOR FISH CO | DUXBURY |
| SOUSA SEAFOOD INC | BOSTON |
| SOUTH CAPE SEAFOODS INC | CHATHAM |
| SOUTH SHORE LOBSTER | HINGHAM |
| SOUZA SEAFOOD | NANTUCKET |
| STAR FISHERIES CORP | GLOUCESTER |
| STAVIS SEAFOODS INC | BOSTON |
| STEVE CONNOLLY SEAFOOD CO INC | GLOUCESTER |
| STEVE'S FILLETS INC | NEW BEDFORD |
| SWAN RIVER FISH MARKET | DENNISPORT |
| SWAN RIVER RESTAURANT & FISH | DENNISPORT |
| TASTY SEAFOOD COMPANY | MARION |
| TEMPEST FISHERIES LTD | FAIRHAVEN |
| THE BAITMAN | HANSON |
| THE BEST FISH CO | NORTH TRURO |
| THE FRESH CATCH INC | MANSFIELD |
| THE LOBSTER POT | NORWELL |
| THREE LANTERNS SEAFOOD CO | GLOUCESTER |

MASSACHUSETTS (CONTINUED)

| | |
|--------------------------------|-----------------|
| TICHON SEAFOOD CORPORATION | NEW BEDFORD |
| TIMOTHY SHEA FISHERIES | KINGSTON |
| TIRRELL SEAFOOD & SHELLFISH | BOSTON |
| TREBLOC SEAFOOD | MANOMET |
| TRI-COASTAL SFD COOP INC | NEWBURYPORT |
| TURK'S SEAFOOD | MATTAPOISETT |
| VENTURE FISHERIES | SOUTH CHATHAM |
| VESSEL BOZO INC | NORTH DARTMOUTH |
| VICTORY FISHERIES | PROVINCETOWN |
| VINEYARD CO-OP/ROBERT MONE | VINEYARD HAVEN |
| W B VAN DUZER CO | KINGSTON |
| WELLFLEET OYSTER & CLAM CO LTD | WELLFLEET |
| WESTPORT LOBSTER CO | WESTPORT |
| WHALING CITY DISPLAY AUCTION | NEW BEDFORD |
| WHOLESALE SEAFOOD | FAIRHAVEN |
| WILLIS E BLOUNT COMM FISH CORP | NANTUCKET |
| WONG TRADING INC | CANTON |
| WORLD WIDE TRADING INC | DANVERS |
| SEA RICH SEAFOODS INC | NEW BEDFORD |

NEW HAMPSHIRE

| | |
|--------------------------------|--------------|
| BROWN'S SEABROOK LOBSTER POUND | SEABROOK |
| CAPE SHARK CHOWDER | HOLLIS |
| DEFIANT LOBSTER COMPANY | HAMPTON |
| ISLAND LOBSTER CO | NEW CASTLE |
| LITTLE BAY FISH CO | NEWINGTON |
| LITTLE JOES SEAFOOD EXPRESS | SANBORNVILLE |
| NH SEACOAST CRUISES INC | RYE |
| PORTSMOUTH FISHERMENS COOP | PORTSMOUTH |
| S J DRISCOLL CO | HAMPTON |
| SANDERS LOBSTER CO INC | PORTSMOUTH |
| SEATRADE INTERNATIONAL | PORTSMOUTH |
| TRI STATE SEAFOODS INC | SOMERSWORTH |
| YANKEE FISHERMAN | HAMPTON |
| YANKEE FISHERMANS COOPERATIVE | SEABROOK |

NEW JERSEY

| | |
|--------------------------------|----------|
| ABEL H MIGUEL | KEARNY |
| AHEARN'S SEAFOOD MKT | WARETOWN |
| ALII NUI CHARTERS INC | VERONA |
| ATLANTIC CAPES FISHERIES INC | CAPE MAY |
| AXELSSON & JOHNSON FISH CO INC | CAPE MAY |
| BELFORD SEAFOOD CO-OP | BELFORD |

NEW JERSEY (CONTINUED)

| | |
|--------------------------------|----------------------|
| BILL'S FLUKE | CAPE MAY COURT HOUSE |
| BILLY'S RED ROOM INC | WHIPPANY |
| BLACK TIGER COMPANY INC | EGG HARBOR CITY |
| CAPE MAY FISHERIES CO-OP INC | WILDWOOD |
| CAPE MAY FOODS | MILLVILLE |
| CAPE MAY FOODS INC | BURLEIGH |
| CAPE SEAPAK INC | CAPE MAY COURT HOUSE |
| CAPT BILL'S BAIT & TACKLE | NEPTUNE |
| CAPT'N CHARLIES CLAMS | NORTH CAPE MAY |
| CARLSONS SEAFOOD INC | WILDWOOD |
| CARMEN'S LOBSTER POOL | SEA ISLE |
| CASINO LOBSTER COMPANY | PLEASANTVILLE |
| CHEFS INTERNATIONAL INC | POINT PLEASANT |
| COLD SPRING FISH & SUPPLY CO | CAPE MAY |
| COTTRELL'S LOBSTERS | HIGHLANDS |
| DILL'S SEAFOOD | BRIDGETON |
| DOCK STREET SEAFOOD | WILDWOOD |
| DON PHILIPP | POINT PLEASANT |
| DONALD L MYERS | WEST CREEK |
| EMPTY POCKETS | HIGHLANDS |
| EXPORT INC | BARNEGAT LIGHT |
| FIRST RESORT CORP | CAPE MAY |
| FISHERMEN'S DOCK COOPERATIVE | POINT PLEASANT BCH |
| FISH-N-FOOL | CAPE MAY |
| FV SUNNY SUE | CAPE MAY COURT HOUSE |
| GEORGE SIMMONS | CAPE MAY |
| HAPPY WORLD AMERICA INC | ELIZABETH |
| HOWARD MASON | VILLAS |
| IBERIA PENISULA INC | NEWARK |
| IBERIA TAVERN & REATAURANT INC | NEWARK |
| J W COMMERCIAL FISHING INC | OCEANVIEW |
| JACOB SEMANCHIK | NEPTUNE |
| JIM GIFFORD SEAFOOD | MAURICETOWN |
| JUDITH ANN | BEESLEY'S POINT |
| KASHIKO EXPORTS | PT PLEASANT BEACH |
| KING KRAB RANCH | PORT NORRIS |
| KLEIN'S FISH MARKET INC | BELMAR |
| LARMA CORP/ UNION LANDING REST | BRIELLE |
| LOBSTER BARN INC | HIGHLANDS |
| LOGLINE ENTERPRISE | POMPTON PLAINS |
| LUND'S FISHERIES INC | CAPE MAY |
| MAB SEAFOOD | TRENTON |
| MILLER DISTRIBUTORS | POINT PLEASANT BCH |
| MY THREE SONS SEAFOOD & PROD | PARKERTOWN |
| NORTHEAST SHELLFISH COMPANY | ALLENWOOD |

NEW JERSEY (CONTINUED)

NORTHSTAR FISH COMPANY
 OCEAN BEACH ENT INC
 OCEAN INTERNATIONAL INC
 OCEAN SPORT FISHING
 ONE THOUSAND FATHOM'S
 PATHWAY INVESTMENT CORP
 PEACHES & CREAM INC
 PETER WALLING
 PHILLIPS SEAFOOD INC
 POINT LOBSTER CO INC
 PT PLEASANT PACKING INC
 R & E SLAMB INC
 RED'S
 RED'S LOBSTER DOCK
 SEACOAST OCEAN DIST
 SEAHARVESTER
 SHOAL HARBOR LOBSTER CO INC
 SNOW'S/DOXSEE, INC
 SPIKE'S OF POINT PLEASANT INC
 STEVE MIZRAHI
 SURFSIDE PRODUCTS INC
 T R W
 THE WILLOW HILL FISH CO
 TRUE WORLD FOODS INC
 VERNON LEWIS
 VIKING VILLAGE INC
 WALL CHILD INC
 WIZARD ENTERPRISES
 WOOLLEYS FISH MARKET INC
 YAMA SEAFOOD INC

KEARNY
 PINE BEACH
 JERSEY CITY
 BRICK
 BRIELLE
 WYCKOFF
 BELLE MEAD
 ASBURY PARK
 BARNEGAT LIGHT
 POINT PLEASANT BEACH
 POINT PLEASANT BEACH
 CAPE MAY
 POINT PLEASANT BEACH
 POINT PLEASANT BCH
 HIGHLANDS
 HEISTERVILLE
 BELFORD
 CAPE MAY
 WALL
 FREEHOLD
 PORT NORRIS
 TOMS RIVER
 BELLE MEAD
 ELIZABETH
 NEPTUNE
 BARNEGAT LIGHT
 TOMS RIVER
 BAY HEAD
 MANASQUAN
 JERSEY CITY

NEW YORK

AGGER FISH CORP
 AMY ROSE INC
 ARROW SFD INC
 BABYLON FISHING STATION
 BARBARAS SEAFOOD MARKET
 BAY PARK FISHING STATION INC
 BLUE MOON FISH INC
 BLUE RIBBON FISH CO
 BLUE WATER FISHERIES INC
 BOAT E T
 BOB GOSMAN CO
 BURTON PRINCE

BROOKLYN
 DEER PARK
 NEW YORK
 BABYLON
 HAMPTON BAYS
 OCEANSIDE
 MATTITUCK
 NEW YORK
 MONTAUK
 FREEPORT
 MONTAUK
 RYE BROOK

NEW YORK (CONTINUED)

| | |
|--------------------------------|---------------|
| C & C OCEAN LTD | FREEPORT |
| C & D FISH INC | MONTAUK |
| C G DINO'S INC | NEW YORK |
| CALAMARI MAN | BRONX |
| CALEB HALEY & CO INC | NEW YORK |
| CAPT BEN'S FISH DOCK INC | FREEPORT |
| CAPT JACK'S LLC | WEST ISLIP |
| CBSD INC | FREEPORT |
| CLAMMAN SEAFOOD MKT INC | SOUTHAMPTON |
| COASTAL SEAFOOD TRANSFER | WEST BABYLON |
| CORCORAN SEAFOOD DELIVERY | MANORVILLE |
| COR-J SEAFOOD INC | HAMPTON BAYS |
| D & S SEAFOOD | HARTSDALE |
| D B FISH INC | MASTIC |
| DEEPWATER SEAFOODS INC | MONTAUK |
| DRESNO | BROOKLYN |
| EMERALD SEAFOOD COMPANY INC | NEW YORK |
| F & L FILLET | NEW YORK |
| FAIR FISH CO INC | NEW YORK |
| FATHERS FISH CO INC | NEW YORK |
| FISH ONE INC | NEW HYDE PARK |
| FOOD & FISH INC | HAMPTON BAYS |
| FRANK W WILKISSON INC | NEW YORK |
| FROMETTA CONSIGNMENT CORP. | UNKNOWN |
| FULL MOON FISHERIES | EAST HAMPTON |
| FULTON FISH MARKET | NEW YORK |
| GEORGE BRAUN OYSTER CO INC | CUTCHOGUE |
| GLOUCESTER FISH COMPANY | NEW YORK |
| GOTHAM SEAFOOD CORPORATION | NEW YORK |
| HAPPY HOOKER FISH CO | BRIGHTWATERS |
| HART LOBSTER | WEST SAYVILLE |
| HUDSON POINT FISH STA INC | FREEPORT |
| INLET SEAFOOD | MONTAUK |
| JEFFREY M KRAUS | SOUTHAMPTON |
| JMS SEASONAL SEAFOOD CORP | NEW YORK |
| JOE MONANI FISH CO | NEW YORK CITY |
| JOHN G MIHALE | ISLAND PARK |
| JONES INLET PACKING CO LTD | PT LOOKOUT |
| JOSEPH H CARTER INC | NEW YORK |
| KWOK VINCENT | E ELMHURST |
| L J FISH INC | NEW YORK |
| LOCKWOOD & WINANT INC | NEW YORK |
| LONG ISLAND FISH EXCHANGE | NEW YORK CITY |
| LONG ISLAND SEAFOOD EXPORT INC | EAST QUOGUE |
| LOU'S FISH MARKET INC | NEW YORK |

NEW YORK (CONTINUED)

| | |
|-------------------------------|-----------------|
| M SLAVIN & SONS LTD | NEW YORK |
| MERIT SEAFOOD CORPORATION | GREENPORT |
| MILLIGAN SEAFOOD CO | SOUTHAMPTON |
| MOE BEHRENS SEAFOOD INC | WEST ISLIP |
| MONTAUK FISH DOCK | MONTAUK |
| MONTAUK MARINE BASIN | MONTAUK |
| MONTE'S SEAFOOD EMPORIUM INC | BRONX |
| MT SINAI FISH INC | NEW YORK |
| MULTI AQUACULTURE SYSTEMS INC | AMAGANSETT |
| OFFSHORE SPORTS MARINA INC | MONTAUK |
| PELLS FISH DOCK & MARINA INC | HAMPTON BAYS |
| PERRY B DURYE & SON INC | MONTAUK |
| PESCADOS FROMETTA | UNKNOWN |
| PIERLESS FISH CORP | BROOKLYN |
| POINT CLAM COMPANY | FREEPORT |
| POINT LOBSTER & FISH | POINT LOOKOUT |
| PORTLAND MAINE LOBSTER CO | HUNTINGTON |
| PT LOOKOUT FISH DOCK INC | PT LOOKOUT |
| RAINBOW CONNECTION INC | EAST HAMPTON |
| RAJ FISH CORP | GREENLAWN |
| RALBORAY INC | UNKNOWN |
| RESTLESS FISHERIS | SEAFORD |
| RICHARD J RADE JR | MONTAUK |
| ROBERT HAMILTON JR INC | GREENPORT |
| S & R FISHERIES INC | HAMPTON BAYS |
| SALT WATER ENTERPRISES | MATTITUCK |
| SHINNECOCK FISH DOCK INC. | HAMPTON BAYS |
| SHINNECOCK FISH PACKING INC | BAYSHORE |
| SOUTH SHORE FISH MKT INC | ISLAND PARK |
| ST PETER DOCK INC | FREEPORT |
| STUART'S SEAFOOD MARKET LTD | AMAGANSETT |
| SUNRISE LOBSTER CO | BAYSHORE |
| SUNRISE SEAFOOD INC | NEW YORK CITY |
| SUSAN DRESNER | BROOKLYN |
| SUSHI FISHING & CHARTERS INC | BROAD CHANNEL |
| T M FISH INC | MONTAUK |
| TCI FISHERIES LLC | FREEPORT |
| TERRA TRADE COMPANY | JACKSON HEIGHTS |
| THE SEAFOOD SHOP | WAINSCOTT |
| THIRD GENERATION FISH CO | NEW YORK |
| THOMAS E CRONAN | MERRICK |
| TIM HATCH | FRANKLIN SQUARE |
| TONY CRAB KING INC | ISLIP |
| TOP CATCH INC | BROOKLYN |
| TWO COUSINS FISH MARKET INC | FREEPORT |

NEW YORK (CONTINUED)

VALENCAMBO SUPERIOR SEAFOOD
 VANDERBILT'S WHARF LTD
 WAH HOI SEAFOOD TRADING INC
 WESTBURY FISH CO
 WHITE CAP FISH CO INC
 WILKINSON'S SEAFOOD
 WILLIAM W REED
 WILLIAMS SEAFOOD ENT. INC
 WOODCLEFT FISHING STATION
 Y SYMA CORPORATION
 YOUNG KWANG FISH CORP
 SHINNECOCK FISHERMEN'S COOP

PORT CHESTER
 OAKDALE
 NEW YORK
 WESTBURY
 ISLIP
 NEW YORK
 HAMPTON BAYS
 NEW YORK
 FREEPORT
 BROOKLYN
 FLUSHING
 SHINNECOCK

NORTH CAROLINA

AMERICAN FISH
 AUSTIN SEAFOOD
 AVON SEAFOOD
 B & B INC/JERRY A MALINSKI
 BERESOFF FISHING
 BIG ROCK BLUE MARTIN TOURNMENT
 BLACKBURN BROS INC
 BOWMANS SEAFOOD
 CAPE FEAR FISH MERCHANTS LLC
 CAPE FEAR SEAFOOD CO
 CAPE HATTERAS SEAFOOD
 CAPE POINT BAIT CO INC
 CAPT JIM'S SEAFOOD INC
 CAROLINA ATLANTIC SEAFOOD INC
 CLAYTON FOLCHER SFD CO INC
 CLYDE PHILLIPS SEAFOOD
 CRYSTAL COAST FISHERIES
 DAVID P FARROW JR
 DAVIS SEAFOOD
 DIAMOND SHOAL SEAFOOD INC
 ENGELHARD SEAFOOD INC
 ENGELHARD SMATTAMASKECT SFD INC
 FISHERMAN'S SEAFOOD INC
 FULCHERS POINT PRIDE SEAFOOD
 GARLAND F FULCHER SEAFOOD CO
 GASKILL SEAFOOD INC
 GRANT'S OYSTER HOUSE
 HARRIS SEAFOOD
 HATTERAS BLUE
 HOBO SEAFOOD

SOUTHPORT
 NAGS HEAD
 AVON
 BEAUFORT
 BOLIVIA
 MOREHEAD
 CAROLINA BEACH
 SNEADS FERRY
 WILMINGTON
 SOUTH PORT
 HATTERAS
 BEAUFORT
 MOREHEAD CITY
 MOREHEAD CITY
 ENGELHARD
 SWANSBORO
 MOREHEAD CITY
 MANTEO
 SNEADS FERRY
 ORIENTAL
 ENGELHARD
 SWAN QUARTER
 WANCHESE
 ORIENTAL
 ORIENTAL
 BAYBORO
 SNEADS FERRY
 WILMINGTON
 HATTERAS
 SWAN QUARTER

NORTH CAROLINA (CONTINUED)

| | |
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| HOMER SMITH SEAFOOD INC | SALTER PATH |
| HOPKINS SEAFOOD | BELHAVEN |
| I T M | CHAPEL HILL |
| JANET W WHITBECK INC | HATTERAS |
| JAW'S FISH CO | WANCHESE |
| JOHNNIE MERCER | NEW BERN |
| JRA INC/JEFFREYS SEAFOOD | HATTERAS |
| JS PACKING | WILMINGTON |
| KERRY & SON SEAFOOD INC | BEAUFORT |
| LANIER FISHERIES | HAMPSTEAD |
| LOWLAND SEAFOOD INC | LOWLAND |
| LT EVERETT & SONS SEAFOOD | SNEADS FERRY |
| LUCKY INTERNATIONAL INC | MOREHEAD CITY |
| LUTHER L SMITH & SON SEAFOOD | ATLANTIC |
| MATHEW DAVID HOLLAR | WASHINGTON |
| MOON TILLET FISH CO | WANCHESE |
| MORGAN HARVEST INC | GLOUCESTER |
| MOTTS CHANNEL SEAFOOD | WRIGHTSVILLE |
| O'NEAL'S SEA HARVEST | WANCHESE |
| OSPREY FISHERIES INC | OCRACOCK |
| PAMLICO PK CO INC | VANDMERE |
| PITTMAN SEAFOOD CO | BEAUFORT |
| QUALITY SEAFOOD CO IN | WANCHESE |
| R E MAYO CO INC | HOBUCKEN |
| R W JONES FISH CO INC | NEWPORT |
| RISKY BUSINESS SEAFOOD | BUXTON |
| ROSE SEAFOOD | BEAUFORT |
| SANDY BAY FISH COMPANY INC | WINSTON SALEM |
| SEA HARVEST SHELL FISH | SWANSBORO |
| SEAFOOD CONNECTIONS | JACKSONVILLE |
| SLIM PICKENS SEAFOOD | OCRACOCK ISLAND |
| SMITH SEAFOOD CONTAINER INC | BEAUFORT |
| SOUTH POINT MARKET INC | OCRACOCK |
| TAYLOR SEAFOOD | BEAUFORT |
| TIMS SEAFOOD | HAMPSTEAD |
| TOP DOLLAR SEAFOOD | HATTERAS |
| TOP FIN L L C | WANCHESE |
| WILLIAM SMITH SEAFOOD INC | BEAUFORT |
| WILLIAMS SEAFOOD INC | ENGELHARD |
| WILLIE R ETHERIDGE SEAFOOD CO | WANCHESE |
| YEOMANS SEAFOOD | HATTERAS ISLAND |

RHODE ISLAND

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| AMANDA MEL LOBSTER CO | BLOCK ISLAND |
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RHODE ISLAND (CONTINUED)

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| AQUIDNECK LOBSTER COMPANY | NEWPORT |
| BAY STATE SEAFOOD INC | LITTLE COMPTON |
| BAYSIDE SHELLFISH | TIVERTON |
| BLACK POINT FISH TRAP CO | WAKEFIELD |
| BLOCK ISLAND SEAFOOD PACKING | BLOCK ISLAND |
| BLOUNT SEAFOOD CORP | WARREN |
| BREACHWAY SEAFOODS INC | WAKEFIELD |
| BRIDGEPORT SEAFOOD | TIVERTON |
| CAPEWAY SEAFOODS INC | PROVIDENCE |
| CARTER SEAFOOD | PORTSMOUTH |
| CELESTIAL FOOD DIST INC | SAUNDERSTOWN |
| CHAMPLIN ENTERPRISES | NARRAGANSETT |
| CHAMPLIN SFD OF WICKFORD | NORTH KINGSTOWN |
| CHUBBY FISH INC | WAKEFIELD |
| CLIPPER SEAFOOD | NARRAGANSETT |
| COAST CANNING & FISH PROCESS | NEWPORT |
| D & C FISH CO INC | NARRAGANSETT |
| DAVE HANDRIGAN SEAFOODS INC | NARRAGANSETT |
| DEEP SEA FISH OF RI INC | WAKEFIELD |
| ESTRELA SEAFOOD | CRANSTON |
| F/V ERICA KNIGHT | WAKEFIELD |
| FINNEST KIND SEAFOOD CO INC | WEST KINGSTON |
| FINN'S FISH MARKET | BLOCK ISLAND |
| FISH QUEST INC | PORTSMOUTH |
| FRANCES FLEET | PEACE DALE |
| FV KAREN ANN | WEST KINGSTON |
| GALILEAN SEAFOOD INC | BRISTOL |
| GREEN DIAMOND LOBSTER | BLOCK ISLAND |
| H N WILCOX FISHING INC | GREENVILLE |
| HANDRIGANS SEAFOOD INC | NARRAGANSETT |
| HEATHER LYNN INC | WAKEFIELD |
| HENRY AVERY & COMPANY | NEWPORT |
| HMH INC/CHAMPLIN'S SFD | NARRAGANSETT |
| INTERNATIONAL MARINE IND | NEWPORT |
| J & A FISHERIES | TIVERTON |
| KENPORT MARINA | WAKEFIELD |
| KSJ SEAFOOD INC | NARRAGANSETT |
| LABORE SEAFOOD LTD | NARRAGANSETT |
| LIONS PRIDE SEAFOOD | WESTERLY |
| MC FRESH INC | PEACE DALE |
| N PARASCANDOLO & SONS INC | NEWPORT |
| NARRAGANSETT BAY LOBSTERS INC | NARRAGANSETT |
| NEW ENGLAND SEAFOOD | SO KINGSTOWN |
| NONQUIT FISH CO | TIVERTON |
| NORTH EAST ATLANTIC SFD LTD | NARRAGANSETT |

RHODE ISLAND (CONTINUED)

OCEAN STATE LOBSTER COMPANY
 OLD SALT SEAFOOD CO INC
 OSPREY SEAFOOD INC
 PAIVA'S SHELLFISH INC
 POINT TRAP CO INC
 PT JUDITH FISHERMENS COOP INC
 RAT ISLAND LOBSTER CO
 RED TAIL FISHERIES INC
 RHODE ISLAND RED SEAFOOD
 SEA FRESH USA INC
 SEA PRIDE TRAWLERS INC
 SEACOAST SEAFOOD
 SEACREST INTERNATIONAL INC
 SEAFOOD PROCESSING CO OF RI
 SEAFREEZE LTD
 SKIPS DOCK INC
 SLACKER SEAFOOD INC
 SLAVIN POINT JUDITH CO LLC
 SNUG HARBOR MARINA INC
 SOUTH PIER FISH CO INC
 TALLMAN & MACK INC
 THE BAIT COMPANY
 TONY'S SEAFOOD
 TOWN DOCK INC
 WAMM INC

WAKEFIELD
 NARRAGANSETT
 NARRAGANSETT
 CRANSTON
 PORTSMOUTH
 NARRAGANSETT
 BLOCK ISLAND
 W KINGSTON
 EXETER
 NARRAGANSETT
 WAKEFIELD
 GALILEE
 WAKEFIELD
 NARRAGANSETT
 NORTH KINGSTON
 WAKEFIELD
 NARRAGANSETT
 NARRAGANSETT
 WAKEFIELD
 WAKEFIELD
 TIVERTON
 WEST KINGSTON
 WARREN
 NARRAGANSETT
 MIDDLETOWN

VIRGINIA

B & C SEAFFOD INC
 BENDER SEAFOOD
 BERNIE'S CONCHS
 BRENDA D CLOSE
 C & T SEAFOOD
 CAPE CHARLES SEAFOOD
 CHES ATLANTIC SEAFOOD
 CHESAPEAKE BAY PKG LLC
 CHINCOTEAGUE FISHERIES
 CHINCOTEAGUE SEAFOOD CO , INC
 CRAIG G NEFF
 D L EDGERTON FISH CO
 D.M. MARINA
 DELORES OF WANCHESE
 DEMARIA SEAFOOD
 EAST COAST FISH & SCALLOP CO

NEWPORT NEWS
 NASSAWADOX
 CHERITON
 MOON
 TANGIER
 CAPE CHARLES
 UNKNOWN
 NEWPORT NEWS
 CHINCOTEAGUE
 CHINCOTEAGUE
 NORFOLK
 CHINCOTEAGUE
 VIRGINIA BEACH
 HAMPTON
 NEWPORT NEWS
 NEWPORT NEWS

VIRGINIA (CONTINUED)

EASTERN SHORE SEAFOOD PROD
 ESS PRIDE L L C
 FISHERMENS SEAFOOD
 GEORGE'S SEAFOOD INC
 HAMPTON ROADS SEAFOODS LTD
 HARRY DOERNTE
 IAN NIGEL
 J H LEA & SONS
 J H MILES & COMPANY INC
 J H WEST SEAFOOD
 JORDONS SEAFOOD
 L D AMORY & CO INC
 LILLISTON SEAFOOD
 LONG POINT FISH CO
 OLD POINT PACKING INC
 ORANACOCK COOP
 PEABODY CORP
 PYA/MONARCH INC
 R & S SEAFOOD
 R STUBBS SEAFOOD CO
 RUSSEL FISH CO
 S & S MARINE SUPPLY INC
 SEA BASSTARDS SEAFOOD
 SEAFORD SCALLOP CO INC
 SEASIDE ENTERPRISES
 SELBY ENTERPRISES LLC
 SNELDERS FISHERIES
 SPOT FISH COMPANY
 THE PHOENIX FRP INTL LLC
 V J O'NEAL & COMPANY INC
 WANCHESE FISH CO INC
 WELLS ICE & COLD STORAGE INC
 WHITTAKER PHARMACEUTICAL
 WILLARD READE NICOLLS III
 WILLIAM SEAFOOD

MAPPSVILLE
 MAPPSVILLE
 HAMPTON
 NORFOLK
 HAMPTON
 POQUOSON
 NEWPORT NEWS
 HAMPSTEAD
 NORFOLK
 CHERITON
 UNKNOWN
 HAMPTON
 WACHAPREAGUE
 GREENBACKVILLE
 NEWPORT NEWS
 ONANCOCK
 NEWPORT NEWS
 VIRGINIA BEACH
 WACHAPREAGUE
 CHINCOTEAGUE
 CHINCOTEAGUE
 HAMPTON
 CHINCOTEAGUE
 SEAFORD
 PARKSLEY
 HAMPTON
 CHINCOTEAGUE
 VIRGINIA BEACH
 VIRGINIA BEACH
 SEAFORD
 HAMPTON
 SEAFORD
 CHINCOTEAGUE
 CRADDOCKVILLE
 CHINCOTEAGUE

